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The
Desert People

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The Desert People

A Study of the Papago Indians

By
Alice Joseph, M.D.
Rosamond B. Spicer
Jane Chesky

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Rosamond B. Spicer

Baboquivari Peak, Center of the Papago Universe

[Facing p. iii]

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INTRODUCTION

121 THIS book was written as part of the Indian Education Research Project undertaken jointly by the Committee on Human Development of the University of Chicago and the United States Bureau of Indian Affairs.

The immediate objectives of this project were to investigate, analyze, and compare the development of personality in five American Indian tribes in the context of the total environment setting—social, cultural, geographical, and historical—for implications in regard to Indian administration. The ultimate aim of the long-range plan of research, of which this project is the first step, is to attempt a systematic evaluation of the whole Indian administrative program with special reference to the effect of the new Indian Service policy on the Indians as individuals, to indicate the direction toward which these policies are leading, and to suggest how the effectiveness of Indian administration may be increased.

This research has been carried on since 1941 through the co-operative efforts of a large staff drawn from several disciplines—chiefly anthropology, sociology, psychology, psychiatry, medicine, human geography, linguistics, education, and public administration.

The field program was to investigate the development of the personalities of about a thousand children six to eighteen years old, selected so as to represent one or more communities in each of the following tribes: Hopi, Navaho, Papago, Sioux, and Zuni. In tribes such as the Papago and the Sioux, where background data were relatively few, an anthropological study was also included in field work.

OUD The results of the project are being reported in monographs on the several tribes and in shorter reports on special phases of the research in all communities. Tribal monographs already published are: *The Hopi Way*, by Laura Thompson and Alice Joseph (University of Chicago Press, 1944); *Warriors without Weapons: A Study of the Pine Ridge Sioux*, by Gordon Macgregor (University of Chicago Press, 1945); *The Navaho* and *Children of the People* (2 vols.), by Dorothea C. Leighton and Clyde Kluckhohn (Harvard University Press, 1947). A study of the Zuni tribe is in preparation. Reports on special phases of the work are listed in the Appendix, and others are being prepared.

INTRODUCTION

PILOT STUDY AND GENERAL PROCEDURE

114 After the acceptance of the Indian Education Research Project by the Papago Tribal Council in February, 1942, a three-month "pilot" study was conducted on the Papago Reservation by Dr. Laura Thompson, Project Co-ordinator, Dr. Ruth Underhill, and Dr. Alice Joseph. Dr. Underhill, anthropologist with the Bureau of Indian Affairs, had already made extensive field studies among the Papago, and Dr. Joseph had worked with the group for a year in the capacity of Reservation field physician. With the help of the Tribal Council, the Sells Parent-Teachers' Association, and the Indian Service personnel, especially D'Arcy McNickle, field representative, and the teachers at the Sells, Vamori, Gu Achi (Santa Rosa), Choulic, Schuchk (Santa Rosa Ranch), and Kohatk schools, the investigators tried out a number of different kinds of tests and field procedures. Based on results of the "pilot" field study, the following general procedure was adopted for the project as a whole:

125 The personalities and life-histories of a representative sample of children from each selected community were studied by means of a battery of psychological tests of both the projective and the performance types, supplemented by interviews with parents, teachers, and other community members and by medical examinations. The systematic study of individual personalities was limited to children of school age (six to eighteen years) because of their greater accessibility for the testing program. Much of the testing and interviewing was done by Indian Service teachers, trained and supervised by members of the research staff. Medical examinations and tests requiring experienced technicians for their administration, such as the Rorschach and the Thematic Apperception (adapted), were given by qualified staff personnel. The testing program is described in chapter xi.

122 Background data concerning the culture, the geographic environment, and the history were collected by anthropologists, who also drew on the literature, both published and unpublished, and on long-range plans prepared by the administrative personnel in co-operation with the Indians of each Agency.

Field findings were analyzed and interpreted by Project technicians at the University of Chicago.

SELECTION OF PAPAGO CHILDREN AND VILLAGES TO BE STUDIED

121 Owing to rather considerable regional differences in the degree of white contact on the Papago Reservation and to local variations in culture, it seemed advisable to select children from two areas, one representing a more accultu-

rated, the other a less acculturated, group. Lack of housing and war restrictions on transportation eliminated some of the villages. The advantage of having the teachers work with the Indians whom they knew affected the selection of villages and the placement of trained personnel in the field. 121

After due consideration it was decided to study the children from two areas: (1) Baboquivari District and (2) Hickiwan and Gu Vo districts. The former was considered to be the more acculturated. These areas belonged to different dialect groups to which different personality traits were attributed by the Papago. In Baboquivari District investigation was limited to four related villages: Topawa, Komelik, Supi Oidak (Cold Fields), and Choulic. The selected villages include 76 households with a total of 127 school children attending local government day schools at Sells and Choulic, local Roman Catholic day schools at Topawa and San Miguel, or off-Reservation boarding schools at Tucson and Phoenix.

In Hickiwan and Gu Vo the investigation was limited to the related villages of Hickiwan, Emika, Stoa Pitk, Hotason Vo (Charco 27), Tatia Toak (Roadrunner), Vaya Chin (South Well), Gu Vo, and Kuakatch. Schuchuli should have been included in the testing program but was not, an oversight resulting from lack of knowledge of village relationships before the study was begun. However, it was included in the anthropological background study. The selected western villages include about 38 households with a total of 89 children, some of whom attended local day schools at Hickiwan or Gu Vo or off-Reservation schools at Ajo and Phoenix.

The selected Papago children totalled 200 and were about equally divided by sex. The number of children who actually took each test, however, varied considerably because of the migration of families for off-Reservation employment, which increased in frequency during the months of research. No children from Tatia Toak were tested because all of them were off the Reservation with their families, who were working in the cotton fields; none from Kuakatch were tested because they objected. Exact data are given in chapter xi, Table 1. 125

FIELD PROCEDURE—BABOQUIVARI

The testing program in the four selected Baboquivari villages was carried out during the latter half of 1942 by Dr. Alice Joseph, who gave medical examinations and Rorschach and Thematic Apperception tests, and by the teachers of Sells, Choulic, Topawa, and San Miguel schools. Rosamond B. Spicer, an anthropologist with field experience among the Yaqui Indians of Arizona and northern Mexico, conducted the anthropological background study from October, 1942, to July, 1943. She spent the first eight months in Topawa and the

INTRODUCTION

125 last two months in Sells, the Agency headquarters, where she was able to fill in important gaps in the material while writing her report.

123 After receiving permission from the village chief and the District Council, Mrs. Spicer with her two-year-old son settled in Topawa, the largest of the four villages. With the understanding that the regular fiestas should continue to be held there, she lived in the "Feast House," an adobe structure with dirt roof and dirt floor which was used by the Catholic portion of the village. As companion, housekeeper, nurse, and interpreter, she employed the daughter of a leading Topawa family, an intelligent young woman with a ready command of English.

Since the villagers were curious as to the reason why a white woman had come to live in their midst, Mrs. Spicer carefully explained her work to the village chief, emphasizing that she wished to study the language and history of the Papago and the way his people lived, so that other people might know more about them and so that the government might be better able to assist them. This explanation the chief passed on in his official capacity. She gave the same explanation to others who asked, often relating her study to the Project testing program being conducted simultaneously by schoolteachers. The intrusion became accepted as having official sanction, and, as personal relations and friendships were gradually built up, the intruder also came to be accepted.

Living in the village made it possible to attend village affairs, to visit people in their homes, and to hear gossip and opinions on the latest happenings. Trips were made to other villages for these purposes, though the acquaintance there was not so intimate. A continuous effort was made to learn the Papago language, and by the end of the stay simple conversations were understood. Since most people in Baboquivari know at least a little English, there was only occasional need for an interpreter. Spanish was spoken with some of the older people who did not know English.

After establishing a household, the round of everyday life led naturally to an understanding of how other people lived. The investigator attended village affairs such as church services, where she sang in both the Catholic and the Presbyterian choirs; cattle and horse roundups, for which the men were pleased to supply a riding horse and watched with delight the novice's attempts at being a cowboy; and fiestas, where she danced the night through and ate at the fiesta table. Visits with villagers in their homes, and their return visits, slowly became friendly and spontaneous and often led to participation in the local system of gift exchange. At first the talk centered about common interests, but, as time went on, interviews were directed, and people answered questions freely. They wanted to co-operate. There were many small ways in which their assistance could be returned, for church groups, officials, and individuals were ever in need of transportation to attend a fiesta or service in another village, to visit friends, or to go to the Agency. There were bales of hay to buy, mail to be delivered, perhaps even a medicine man to summon.

Thus the investigator became a "participant-observer," trying always to be helpful as a participant and unobtrusive as an observer. Perhaps one of the best openings was through the investigator's two-year-old son, who came to speak more Papago than English and quickly won his way into the hearts of the people.

FIELD PROCEDURE—HICKIWAN–GU VO

Owing to the difficulties of working in the more isolated western districts where almost none of the Papago speak English and strangers are regarded with suspicion, the Hickiwan–Gu Vo testing program was postponed until an anthropologist could "feel out" the situation. Accordingly, after obtaining permission from one of the Hickiwan leaders, Jane Chesky, an anthropologist who had already spent six months studying Papago music in Gu Achi District, took up residence in the Hickiwan schoolteachers' quarters in July, 1942. There she lived until March, 1943, and again for two weeks in May, 1943, studying Papago child-training methods and the anthropological background of the area. Her house was on the edge of Hickiwan Village and was centrally located in relation to Vaya Chin, Stoa Pitk, Emika, Hotason Vo, Tatia Toak, and Schuchuli—other villages which she studied.

The first question asked by nearly every new acquaintance was the investigator's purpose in residing among the Papago. After the reason was explained, it faded into the background. Once friendly relations were established, both adults and children came to Miss Chesky's home quite freely to visit or to ask or return some favor. Information was also obtained on numerous trips she made to the villages themselves. Interviews were conducted in the course of casual visits to Papago homes, participation in Papago village activities, and in the give-and-take of small services.

There were only two exceptions to this general "participant-observer" pattern. First, in discussing with mothers the life-histories of their children, particularly regarding basic disciplines, mothers were asked to answer questions largely as a favor to the interviewer. Second, a young man with high-school education was employed chiefly as an interpreter and used also as an informant; he was the only Papago in whose presence written notes (other than on language) were ever made.

A language difficulty retarded the work at Hickiwan. Only about twelve

INTRODUCTION

123 adults residing in the district during the period of study were able to speak English, and some of these had only slight mastery of it. For this reason, Miss Chesky made considerable effort to understand and speak some Papago. Her knowledge of the language never reached the point where interviews could actually be conducted in that medium, but she understood the gist of conversations sufficiently to furnish some check on interpreters. Furthermore, her halting attempts to speak Papago did much to create friendliness toward her. It was thus possible, without restraint on the part of anyone, to make long visits in homes where no English was spoken. On these visits, some information was picked up by very simple conversation in Papago, and much was observed regarding ordinary village happenings and regarding behavior patterns between the members of a household. Observations made but not understood were discussed later with English-speaking Papagos.

125 With the exception of the Grace Arthur Test, which was given by Mr. Rosen in the summer of 1942, the testing program in the Hickiwan–Gu Vo area was conducted in 1943 by Dr. Joseph and by Mr. and Mrs. Guthrie, Mr. and Mrs. Megivern, and Mrs. Byers, all Indian Service teachers.

ORGANIZATION OF THE MONOGRAPH

128 Part I, "People on the Desert," describes Papago society on the Reservation today, with a brief account of Papago geography, history, and prehistory. This part of the study is mainly the work of Rosamond B. Spicer. However, Jane Chesky made contributions to certain chapters; namely, sections of chapter iv which deal with the position of women and children in the society; sections of chapter vi dealing with certain theories of disease and curing, with the fiesta, and with the Magdalena pilgrimage; and sections of chapter vii on the relations of the Papago with other Indians, Mexicans, and traders.

Part II, "Growing Up on the Desert," describes the development of the average Papago child. This part of the study is based on detailed study of the western Hickiwan villages previously named, but comparisons have been drawn from consultation with field workers in other districts so that a more representative picture of the average Papago child's life might be drawn. It is the work of Jane Chesky, supplemented by comparative material on Baboquivari contributed by Rosamond B. Spicer.

Part III, "The Personality of the Papago Child," describes the results of the testing program carried on in the two research areas of the Reservation. This part of the study is the work of Alice Joseph, M.D.

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INTRODUCTION

TERMINOLOGY

Certain usages in this study need careful definition.

"East" and "West."—These terms refer to the villages studied in the Baboquivari and the Hickiwan-Gu Vo areas, respectively. The terms are not strictly descriptive from a geographical standpoint, as the reader will see from the map facing page 4. Furthermore, not every village in each of the districts named was studied. But, to avoid clumsy phrases and tiresome repetition, the short terms are used.

It should be understood that information in Parts I and II pertains primarily to people and conditions in the villages studied, unless specifically stated to apply to other villages or the Reservation as a whole. Known differences between "eastern" and "western" villages and between them and other villages are indicated. In the main these may said to be differences of degree rather than of kind. Naturally, since the writers of Parts I and II lived in the "East" and the "West," respectively, their work is oriented to the two research areas, but consultation and checking between themselves and with other Papago authorities were carried on often and conscientiously.

"Mexicans."—For the sake of brevity, the term "Mexican" is used in this study to designate both (*a*) the Spanish-speaking Mexican nationals resident in Mexico and (*b*) those persons of Mexican birth or ancestry resident in the United States, who are often termed "Spanish-Americans" in the southwestern United States. The relations of the Papago with Mexican nationals (except with their own kinsfolk, the Papago who live south of the border, and with the Yaqui Indians resident in Mexico) are almost identical with their relations with Spanish-Americans in the United States. They use the same word, *chuchkam*, in describing both groups. Hence "Mexicans" is used here to cover both groups, unless specifically noted to the contrary.

"White Western civilization," or "white" is used to indicate Euro-American tradition and culture. *"American civilization," or "American"* refers specifically to the United States.

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4: Joseph et al D, E-5 (1942-1943) 1949
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Part I

PEOPLE ON THE DESERT

By ROSAMOND B. SPICER

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[p. 1]

Chapter I

THE DESERT PEOPLE

000 DRIVING from Tucson to Ajo in southern Arizona, one passes through a hundred miles of the Papago Indian Reservation. It is an arid land with sparse and, to the unaccustomed eye, strange vegetation, a country of wide valleys and small rugged mountain ranges. Stopping at a trading post for gasoline, the traveler wonders where the trader's customers come from. The lone figure on horseback or the family in a wagon glimpsed along the way would hardly seem enough to justify a store. Where do the customers live, and how can they make a living? If one looks closely, he occasionally sees a shelter or a little cluster of earth-colored houses along the route. A few cattle, patient under the relentless sun, or a field green with corn and squash and beans, give a clue and may also awaken a curiosity to know how the people live and what they think about besides cattle and corn in this dry land. What kind of people are they?

THE PEOPLE

101 The Indians who live in this desert country are known to white people as the Papago. The name probably comes from that given them by their neighbors (as heard and recorded by the Spaniards): *pavi coatam*, "the Bean-eating People," or *pavi au'autam*, "the Bean People," from the tepary bean which was a staple food item. The Papago call themselves *tohono au'autam*, "the Desert People."

619 101 The "Papago tribe" is an administrative title only, for the Indians officially so named were a loose conglomeration of tribes all speaking the Piman language. The Piman-speaking people inhabited a large area that straddles the international boundary and is known as Pimería Alta. These people themselves recognize two main divisions: the River People, who live along the Gila River in the northern part of Pimería and are designated by the government as the "Pima tribe," and the Desert People, now known as the "Papago tribe," who live south of the River People. In both the United States and Mexico there were numerous subgroups or tribes, all speaking dialects of the Piman language,

619 which belongs to the Uto-Aztecan stock.[1] Among all there was a strong feeling
101 of kinship, although the "Papago" feel themselves different from the "Pima."

161 The Desert People in the United States are officially consolidated into "The
Papago Tribe of Arizona." About 5,900 of them live on the Papago Reservation,
101 roughly a sixty-five-mile square lying along the southern border of Arizona
657 between the Baboquivari Mountains on the east and the Ajo Mountains on the west, with an irregular line south of the Gila River as its northern boundary (see Map I). Others live near by on two smaller reservations: about 200 at Gila Bend to the northwest, and almost 500 at San Xavier to the east. Including a few members who live off the reservations, Papago now number close to 7,000, a large tribe which is increasing at the rate of over 1 per cent a year.

It is the Desert People, specifically those who live on the main Reservation,
128 who are the subject of this study; they are referred to here as "the Papago" and their reservation as "the Reservation." Those herein called "the Pima" are the official "Pima tribe," who live on the Gila River and Salt River reservations to the north.

361 On the main Papago Reservation the people live on lonely ranches or in scattered, sprawling villages, many of which existed when the first Jesuit mission-
621 ary, Father Kino, came in 1698. The village is the important unit among the Papago. It always consists of a group of related families, ranging in number from four or five to fifty or sixty household units, totaling perhaps three hundred individuals. However, there are only a few large villages: only thirty-six villages of more than fifty people on the entire Reservation. Sells, the seat of the government agency, has over one thousand inhabitants, but the number of white persons and the fact that many of the Papago families attracted there by government jobs are unrelated make this settlement atypical.

Villages are interrelated through the dialect groups. The original groups were first described by Father Kino, who thought of them as being virtually separate tribes (see chap. v). Since his time the various groups have moved to their present locations and have become officially consolidated into one tribe, but the divisions are still recognized by the Papago.

197 The dialect groups have recently acquired political significance. In 1936 the Reservation was divided into nine districts, roughly equivalent to the dialect
631 groups but also determined by administrative and economic consideratons (see Map I). The outlying San Xavier and Gila Bend reservations form two additional districts. Population in the districts on the main reservation varies from 1,200 in Sells to 250 in Gu Vo, the western districts being most thinly settled.

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[1] There are over fifty linguistic stocks in use among Indians of the United States and Canada today, some of them as different as English and Chinese (see Clark Wissler, *The American Indian*, pp. 391–400).

(4) [text continus on p.7]

4: Joseph et al D, E-5 (1942-1943) 1949
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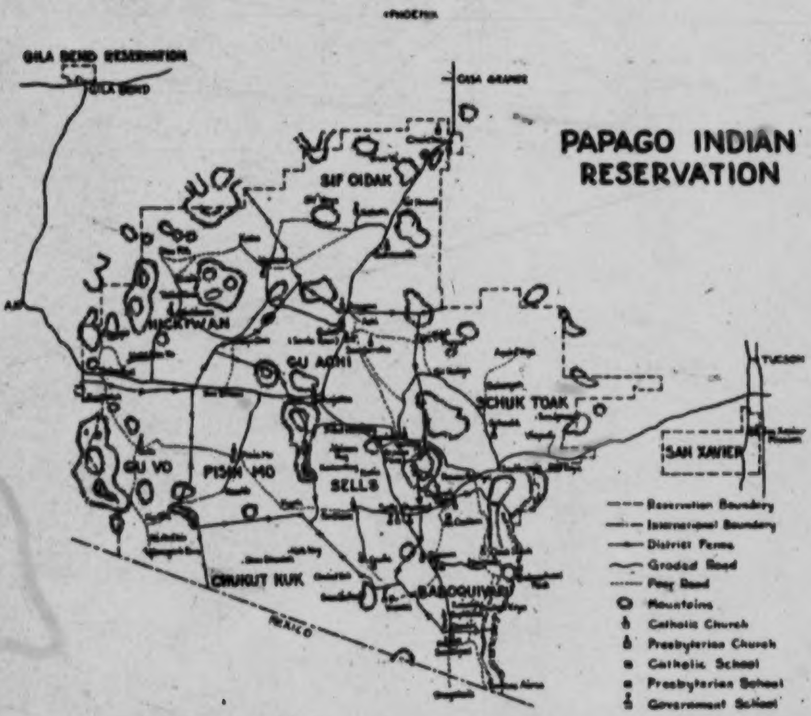
65"

MAP I


PHOENIX
GILA BEND RESERVATION
GILA BEND
CASA GRANDE
PAPAGO INDIAN RESERVATION
SIF OIDAK
AJO
HICKIWAN
GU ACHI
SCHUK TOAK
TUCSON
SAN XAVIER
GU VO
PISIN MO
SELLS
CHUKUT KUK
BABOQUIVARI
MEXICO
Reservation Boundary
International Boundary
District Farms
Graded Road
Pony Road
Mountains
Catholic Church
Presbyterian Church
Catholic School
Presbyterian School
Government School

PAPAGO INDIAN RESERVATION, 1943

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PLATE I

[p.6]

Arizona State Museum

ISOLATED HOME IN THE BABOQUIVARI FOOTHILLS

PEOPLE ON THE DESERT

The two largest Indian villages are in the central and southeastern sections of the Reservation—Topawa in Baboquivari and Gu Achi (Santa Rosa) in the Gu Achi District. 137 631

Unlike most Indian tribes in the United States, the Papago have rather recently come under the jurisdiction of the Bureau of Indian Affairs, United States Department of the Interior; the main reservation (the last large one established) dates only from 1917. The local government agency at Sells on the Papago Reservation is also responsible for the San Xavier and Gila Bend reservations. 657

The Reservation population includes about fifty white government employees and their families, chiefly concentrated at Sells. Scattered over the Reservation are other white people—teachers in the schools under government or religious auspices, other members of the government and mission staffs, traders, and a few miners.

The Papago live on the land, as they have for centuries, by farming small fields and raising livestock, but in recent years they have depended increasingly on wage work on near-by ranches and farms and in mines as well as on employment by the government. Thus an alien culture is entering into their way of life—a culture that has already made a deep impression on the Desert People. 177

As a group the Papago do not much resemble the stereotype which the word "Indian" brings to the minds of most white people: tall gaunt men in eagle-feather headdresses and blanketed women carrying babies on their backs. Though most Papago are rather tall, have large shoulders and chests, and are inclined toward obesity,[2] some are small and slender, and others are of medium build. In all there is a delicacy of feet and hands which suggests small bones. Typical Papago have wide faces with rather heavy features; slanted eyes and long-lobed ears are common. They have dark-brown eyes and straight black hair. Many are dark-skinned, but much of this coloring is due to life in the sun; when a man rolls up his sleeves, one usually sees arms that are a soft yellowish brown. 142

Among the Desert People there are few extreme variations of physical type such as may be observed on reservations like the Sioux, where an Indian may have flaxen hair and blue eyes. Less than one-tenth of 1 per cent of those on the tribal roll are "Papago-American," i.e., have white blood. But there is some Yaqui and other Indian blood among the Papago, and in recent years a few young Papago have married members of other Indian tribes they met at off-Reservation boarding schools. 144

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[2] See Norman Gabel, "A Comparative Racial Study of the Papago" (MS).

PLATE II

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United States Indian Service

Papago Man

[p. 8]

PEOPLE ON THE DESERT

Like many other Indians, the Papago are a young people. About 40 per cent 162
of those living on the three reservations in 1942 were under eighteen years of age. The average age of males was twenty-three years and, of females twenty-one.[3]

Costumes are not so colorful as those of some Arizona and New Mexico 291
tribes such as the Navaho. Most of the older women wear the ankle-length
Mother Hubbard cotton dress with loose blouse used by many older Indian 177
and Mexican women in the Southwest and in Sonora. With this they wear a shawl or *rebozo* usually wrapped tightly around the head with an end hanging down the back, rather than loosely draped and allowed to fall over the shoulders. Younger women and girls wear cotton or rayon dresses in contemporary American style. Fiesta dresses are more colorful, and one occasionally sees the brilliant rayons which added splashes of color to gatherings in former years. Males from the age of one to one hundred wear denim or khaki pants with shirts of cotton for work and bright rayon for festive occasions, kerchiefs about the neck, with brimmed felt hats, and cowboy boots if they can possibly afford them. Some of the educated men have American-style "business suits" for trips off the Reservation. Good clothes, particularly shoes, are bought when there is cash on hand, and a man may spend considerable sums on hats and boots. Even in the conservative western districts of the Reservation, the people buy American clothing, often quite "fancy," for the children and young people. Papago believe clothing should be neat, clean, and modest but not necessarily sober; they all want to "look nice" before other people.

Typically the Papago move with a slow dignity and grace, and only in near- 157
emergency situations does the word "hurry" have any meaning for them. 516
A rider who runs his horse when he is not roping or running cattle is almost certain to elicit the comment, "Oh, he's drunk."

From early childhood the Papago is taught to be quiet, self-contained, and 867
not to become angry. A reserved person whose equanimity is difficult to shake, 195
he expresses opposition or resentment quietly, for he believes in discussion without argument and angry words. He does not ask direct questions or make statements directly; a question is asked through a circumlocution, and answers are given in the same manner. To white people it sometimes sounds like speech in parables, but to a Papago the meaning is perfectly clear. The curiosity of white people often causes difficulty between them and the Indians. Question- [522]
ing about unimportant things the Papago regard as rather humorous, but 576
queries about their personal affairs seem to them extremely bad taste.

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[3] Population data from United States Bureau of Indian Affairs, *Program, Papago Indian Reservation, Arizona*; see also chaps. v and vii below.

576 queries about their personal affairs seem to them extremely bad taste. The Papago like privacy and respect the same desire for it in others.

157 521 Despite their quiet and controlled behavior, there is nothing somber or morose about the Desert People nor do they lack interest in what goes on around them. They are extremely observant and curious about details. With their friends they gossip constantly, but to be vindictive or to show off is not regarded with approval.

609 522 Though the reserve with which Papago greet a white stranger is often called "stolid" by people who do not know them, facial expressions are pleasant. Among themselves they laugh at the endless joking that goes on among family members, over a comic incident, a child's improper behavior, a misstatement, or their own embarrassment. They love to sing, and, in any Papago group, smiles and laughter are constant accents to conversation.

431 Gifts serve as acknowledgment among the Desert People for their language has no phrase for "thank you"; too, they give because they like giving, and the person who does not is thought to be not quite Papago.

THE DESERT

133 It is no wonder that the Papago were not pushed off their land as were many other Indians. This area is one of the hottest and driest in the country, a land in which, with experience and hard work, a family can make a living; but it offers little in the way of surplus.

The Papago country, often referred to by its Spanish name of Papaguería, is a part of what natural scientists call the Lower Sonoran Desert, an area extending north and east to the Mongollon Rim in Arizona, westward into southeastern California, and southward along the western coast of Sonora and Sinaloa in Mexico. It is characterized by a basin and range topography, extreme drought and torrential rainfall, and great changes in daily and seasonal temperatures. A series of small ranges of rugged mountains run roughly northwest to southeast, with wide alluvial valleys marked by networks of washes or arroyos.[4] Elevation of valley floors varies from 1,400 to 2,600 feet, but the mountains on the whole are not high enough to affect rainfall except for the Baboquivaris on the eastern edge, where the tallest peak reaches 7,740 feet and seems to keep all the surrounding desert under its eye.

132 Rainfall in Papaguería is not only scarce but unpredictable. Rains come in the winter months and again from July through September. The gentle winter rains fall steadily over the whole area, sometimes for several days at a time,

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[4] A wash or arroyo is a stream channel which carries water only after the rains. Water rushing down the wash rapidly covers adjacent lands in what are known as flash floods.

but the summer storms come suddenly, the clouds pouring out water and 132
then disappearing as quickly as they came. Rainfall varies greatly on different parts of the Reservation. In the southeastern districts where the mountains are highest, annual precipitation reaches an average of 18 inches in the mountains and about 13 inches in the valleys. Most of the permanent springs and the few small streams that flow for nine months in wet years are located in the foothills of this area. From the center of the Reservation westward, rainfall decreases progressively, averaging only 5 inches in Gu Vo District. Averages give no realistic picture, however, for years of good rainfall are often followed by years in which the washes do not flow at all. The year 1943, when the field work for this study was done, was one of extreme drought, perhaps the worst in history.

Temperature also fluctuates greatly. Winters are mild, with many sunny days, but sometimes the winds are raw and cold, and at night the thermometer may fall to 15° Fahrenheit. Sometimes snow falls on the higher mountains and may remain several days. The summer, from May through September, is extremely hot, with daytime temperatures usually exceeding 100° and often soaring to 120°. Daily range of temperature is wide; the average daily maximum and minimum are 82.5° and 51.1°—an average daily change of 31.4°.

Soils on the Reservation are generally of very good quality; lack of water is 134
the prime factor limiting production. Hence the more arid western districts have a much lower proportion of farm lands and lower range carrying capacity than the central and eastern districts.

Like rainfall, vegetation varies with elevation. On the valley floors are miles 137
and miles of cholla cactus and almost useless creosote bush,[5] and along the washes the sturdy and useful mesquite thrives. In the eastern districts mesquite is the characteristic growth; in the western areas the creosote bush, and in some alkaline regions the saltbush, are the most common plants. Even the mesquite areas are not so useful for range lands as they once were. Until about 1900, these areas were largely covered with perennial bunch grasses which provided good forage and helped to retain the topsoil. With increasing numbers of livestock, these grasses disappeared and the common grasses now are annuals which for forage must be supplemented by mesquite, cholla, saltbush, bur sage, and paloverde. Loss of the perennial grasses has also permitted considerable soil erosion, although there is little gullying because the valleys are flat.

Where the valleys rise to the foothills, and continuing over most of the low ranges, paloverde, ironwood, and giant saguaro cactus are the main stands.

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[5] The creosote bush does furnish lac, a gum with which the Papago mend pottery, and it has [323]
some medicinal uses. But animals will eat it only in an extremity. [314]

137 On the foothills of the higher mountains is a shrub growth which includes false mesquite, yucca, bear grass, and grama grass, the latter excellent for forage, while on the summits of the Baboquivari Mountains are found oak and scrub pine. There are thousands of other varieties, some useful, some not; but those named constitute the principal plants in Papaguería.

136 Not much large wildlife is left now, though there are a few deer, peccary, and wildcat, and, infrequently, a bear or wolf in the mountains. However, myriads of coyotes, rabbits, gophers, pack rats, and many varieties of birds thrive over the whole region. One keeps a wary eye, too, for rattlesnakes.

137 After the rains of winter during which much of the vegetation has stood without sign of life, the desert bursts into bloom. The ocotillo thrusts shoots of red fire from the ends of its long spindly arms, the ironwood sheds a purple haze over hillsides, meadows spring into a riot of color—orange, blue, purple, white. Thorny mesquite and paloverde become clouds of bright yellow, turning into delicate green as the tiny leaves appear. Not so striking in panoramic view but equally beautiful are the perfect waxlike flowers of the various cacti. As spring draws into summer, the bright colors fade into shades of green and brown and gray, overlaid by a film of tan dust, and in the late fall the deciduous trees lose their leaves. On the whole, the greatest change in color comes with the spring, but there is also the daily change of light and shadow: the brilliant sun and the glowering thunderheads, the blue and purple hazes over the mountains, the fleecy white clouds and the deep sky—the sky which seems so much vaster over the desert than anywhere else.

Papaguería, then, is a desert because it is arid, but it is far from being a sandy waste. Its tremendous variety of vegetation is widely distributed to give all a share of what little moisture is available. The desert plants are like the human inhabitants of this area in their adaptation to and use of the land.

Chapter II

UP TO THE PRESENT

FEW Papago know the story of their tribe even during the last few centuries. No longer do the old people tell stories of the past as a regular part of family gatherings on the long winter nights. Today the ancient stories are told only by request—the tale of how the Papago came to their country, the legends of their early life on the desert, and scarcely less often are heard accounts of the more recent Apache raids and the new dispersal of the people. The young and the middle-aged live in the present and look—sometimes hopefully, sometimes anxiously—toward the future. Now, despite their tribal pride, few have more than a sketchy acquaintance with the time before their grandparents or even before their own parents; hence, some of the history given here is not known to most of the Desert People themselves, though parts of it come directly from them. 173

Papago history may be divided into four periods. The first is prehistoric and is known mainly from archeological remains. Then follows a hiatus which, as yet, no one has been able to fill. The second known period is that of sporadic contacts with Spanish missionaries and soldiers and of the struggle against the Apache, with a slow adjustment to certain new ideas but little change in the basic culture. The third era might be called "the early reservation period," when contact with the Indian Service began. During this time the Apache wars ended, contact with a foreign culture was slightly accelerated, and a redistribution of the population began. The fourth and last period, beginning about 1933, might be called "the new era." It is the period of more intense contact with white culture, of the beginning of public works and wage work in the Civilian Conservation Corps, of the acceptance of the Indian Reorganization Act, and of a quickened cultural change. Through these four periods we will briefly trace the course of Papago history—a course that is probably unique among American Indian tribes in its comparative freedom from conflict with land-greedy whites. 175

THE DESERT PEOPLE

BEFORE THE WHITE MAN

172 It is probable that man has lived in Papaguería ten thousand or more years. The prehistoric period of his life there ended about A.D. 1400.[1] Until 1941 we knew very little of the chronology of prehistoric Papaguería. There were many theories, based mainly on findings in surrounding areas correlated with isolated sites on the Reservation, but there was no conclusive evidence. These isolated sites were in the open, and the fragile artifacts which could have served as the basis for the identification had long ago disintegrated.

But in 1941 the opening of Ventana Cave in the northwestern part of the Reservation not only revealed the sequence of cultures in that particular section but proved to be one of the most important archeological discoveries in the whole Southwest. It showed that people lived in Papaguería as long ago as we know that anyone lived on the American continent—more than ten thousand years. Animal remains indicate that these people killed and probably ate animals that are now extinct—the bison, sloth, tapir, and four-horned antelope. Their implements were scrapers, choppers, and points. Some unworked marine shell was found and one mano, which indicates that they ground foodstuffs, probably wild seeds. This culture is a combination of two others known to archeologists as the San Dieguito I of the lower Colorado River Basin and the Folsom.

After this very early period for which there is cultural evidence the cave was probably uninhabited for a while, as indicated by a disconformity in the deposits and a change in environmental conditions. Then people came again and seem to have lived there more or less continuously almost to the present time, leaving behind them many tools and artifacts. According to archeologists, the next inhabitants after the original people represented an eastward extension of Californian hunters ancestral to the early Pinto-Gypsum (Armagosa I) culture.

Two hunting and gathering cultures associated with modern animals followed. The first of these ended sometime before 1000 B.C.; the second about A.D. 1. Both are correlated with phases (Chiricahua and San Pedro) of the Cochise culture of southeastern Arizona and the Pinto-Gypsum stages of the California Desert. They are called "hunting and gathering" cultures because their projectile points, scrapers, planes, and bone awls show that these people must have hunted wild animals and prepared them for food and clothing, and various grinding tools indicate that they gathered wild seeds and roots and

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1. For information about this period the writer is indebted to Dr. Emil W. Haury, chairman of the Department of Anthropology of the University of Arizona.

ground them for food. However, there is no evidence that any of these peoples either practiced agriculture or made pottery.

In the next stage, beginning about the first century A.D., corn and pottery, which are almost always associated in North America, made their appearance. This indicates the beginning of a more or less sedentary agricultural population. The people who had these arts lived in the cave from the first century until about 1400 and seem to have been a part of the general Hohokam culture[2] which was spread widely over southern Arizona in this general period. The cave people's culture was, however, a local variation, and Haury has named it "Desert Hohokam" to differentiate it from the "River Hohokam," which is found at the famous site of Snaketown on the Gila River. There are remains of two periods of the Desert Hohokam culture in the cave. Corn and a plain brown pottery were found, characteristic of the earlier period which extended until A.D. 1100. Evidences of the later era (which is the true Desert Hohokam and the period of the greatest population) were also found: human mummies, cotton textiles, woven sandals, and baskets, all of which made possible correlation with the River Hohokam culture. Each of these periods is divided into phases, and they are correlated with phases of the River Hohokam.

The irrigation ditch leading from the foothills of the Baboquivari Mountains to fields near Valshni Village (an archeological site in the Sells District) was evidently constructed during the "Sells Phase," about A.D. 1250–1400. This ditch was probably intended to catch and control the flood waters of the mountains and bring them to the cultivated lands. The culture of this phase was rather highly developed and ended, it is estimated, about 1400.

The hiatus between 1400 and 1694, the earliest date in Papago recorded history,[3] has been called a "dark age," because there is as yet no evidence of a prevailing culture. It is perfectly possible that earlier occupants of the area survived up to the historical period. In Ventana Cave there is no evidence to the contrary. Changes in the culture might have come through the process of normal invention and contact. This belief was reinforced recently by a specialist in the scientific study of corn,[4] who stated that Papago corn shows botanical characteristics of having been grown in the same environment and by the

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[2] "Hohokam" is the Piman word for "finished" or "gone." This culture is also called "Red on Buff" from its distinctive pottery. The people of this culture, who were termed by Gladwin "the earliest farmers in Arizona," built canals to water their fields (see W. J. and H. S. Gladwin, *The Eastern Range of the Red on Buff Culture*, esp. p. 277).

[3] Manje, Father Kino's military escort, made a trip through the country in that year.

[4] Dr. Edgar Anderson, of the Missouri Botanical Gardens, chairman of the Department of Botany, Washington University, St. Louis, Mo.

172 same people for many centuries. The occupants of Ventana Cave grew the same type of corn a thousand years ago. This suggests a continuity of the Hohokam culture through the Papago, because new immigrants would almost certainly have brought in some new strains of corn.

SPANIARD AND APACHE

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797 The second period of Papago history begins with the first journey of the Jesuit priest, Father Eusebio Francisco Kino, through Papaguería in 1698. It ends shortly after 1870, when the Papago came under the nominal control of the Indian Agent on the Pima Reservation. These one hundred and seventy-five years coincide roughly with the duration of the Apache wars.

More than a century before Father Kino's arrival at the border of Papaguería, Jesuit priests, in company with soldiers and civil officials of Spain, had started their work on the northwestern coast of Mexico. In some places the conquest was cruel and bloody; in others the priests and soldiers were welcomed. Slowly they advanced northward, "reducing" the Indians in one river valley after another. In 1687 Kino finally reached the region that is now northern Sonora, where he settled and established missions.[5] Kino looked toward the north as the great unknown, and he heard about bands of Apaches to the east who had already begun to raid the villages along the San Pedro and Santa Cruz rivers. Eventually he was able to explore this country to the north of him, making several journeys through the heart of Papaguería.

Father Kino was quite aware that he was meeting Indians of more than one tribe on his travels, even though the tribes were much alike culturally and spoke closely related dialects. In his journal and reports he mentions five different groups with whom he visited. They all spoke dialects of the Piman language. These groups were, as he called them: (1) the "Pima proper," who lived nearest the Spanish settlements in northern Sonora, on the upper waters of the several rivers which head there; (2) the Sobaípuri (or Soba y Jípuri), north of the "Pima proper" along the San Pedro and Santa Cruz rivers; (3) the Gileño, along the Gila River to Gila Bend; (4) the "Papago" in the desert between these rivers as far west as the Growler Mountains; and (5) the Soba, along the Lower Altar and San Ignacio rivers and the Gulf of California coast[6] (see Map II). It has been estimated that the Papago as a whole (including all these groups) numbered about 10,000 in 1700.[7] Some of these people Kino saw only briefly; with others he had a long acquaintance.

[5] The portion of history dealing with Father Kino and the Jesuits is taken largely from Herbert Bolton, *Rim of Christendom*, chaps. xiv–xxx.

[6] *Ibid.*, pp. 246–48. See pp. 66 ff. for present distribution of these groups.

[7] Carl Sauer, *Aboriginal Population of Northwestern Mexico*, p. 32.

UP TO THE PRESENT

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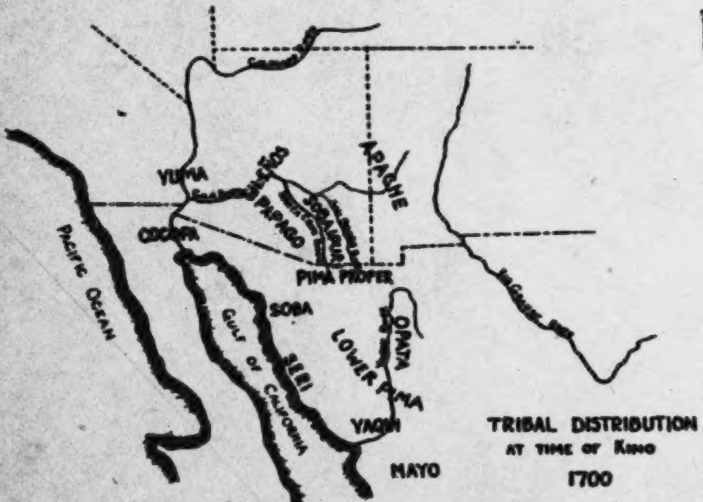
All too little was written by Father Kino and Manje, his military companion, about the way of life of the people they found on their journeys through Papaguería. They tell instead of how these Indians welcomed the priest with "arches and crosses" (which they had learned from Indians whom Kino had already visited) and begged for instruction and baptism. Kino does mention that these Indians had abundant food supplies of corn and beans and large villages with headmen. The neighboring Sobaípuri and the Pima on the Gila River, he said, had chiefs, each of whom controlled more than one village.

MAP II

[101]


YUMA
COCOPA
PAPAGO
SOBAIPURI
APACHE
PIMA PROPER
PACIFIC OCEAN
GULF OF CALIFORNIA
SOBA
SERI
LOWER PIMA
OPATA
YAQUI
MAYO
TRIBAL DISTRIBUTION
AT TIME OF KINO
1700

Distribution of Piman Peoples and Surrounding Tribes about 1700

The Spaniards' trips were hurried, with little more than one-day stops at even the largest villages, during which they spoke to the people about God and the king of Spain and baptized the young children and the sick. In some places they appointed governors and other officials for the villages and gave them canes of office in the name of the king of Spain.[8] The people were friendly and helpful. They always begged Kino to come again.

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[8] Some people say that the Spanish at some time appointed seven governors who were under a head governor at Gu Achi, an organization which apparently was not very effective (United States Bureau of Indian Affairs, *Code of Laws of the Papago Tribe and Annual Statistical Report, Sells Agency . . . 1935*, p. 35).

175 797 He did intend to come again, or to send others, to found missions. For this purpose, and to provision his own expeditions, he sent many herds of horses and cattle ahead and supplied the people with seeds to plant wheat. But no missions were ever founded in the Papago country north of the border.

To the south were established Dolores (Kino's headquarters), Magadalena, San Ignacio, Caborca, Pitaquito, Oquitoa, Tubatama, Sáric, Ootcam near Pozo Verde (just across the present international border at the tip of the Baboquivari Mountains), and Sonóita (on the present border at the western edge of the Papago country). The Pima, Soba, and Papago of this southern territory were fairly thoroughly missionized, although there were occasional uprisings. Three missions were also founded among the Sobaípuri along the fertile Santa Cruz River, the main north-and-south route. These missions—San Gabriel de Guébavi, San Cayetano de Tumacácori, and San Xavier del Bac—were short-lived but were re-established later.

Kino's vision of missions among the Papago proper never materialized. He cultivated the people as much as he could, realizing that they were a bulwark against the marauding Apache, and he gave them cattle, horses, wheat and other seeds, baptism, and a glimpse of Catholicism. But he did not bring about the great change in their culture which the missionized Indians experienced. His influence was felt mainly in the southern and eastern portions of Papaguería.

175 648 Primarily it was the Apache who kept the Papago free from Spanish influence. Before Kino's arrival the Apache had been plunderers, but, after he came, they acquired horses, giving them a wider range and the means of swifter attack. The danger to the Papago increased tenfold. The Apache moved far toward the west, forcing the Sobaípuri before them out of the San Pedro and Santa Cruz valleys.[9] The Apache also occupied the mountains to the north, cutting off the trade route between the Pima and Hopi. Their raids extended far down into Sonora and to villages in the western part of the present Papago Reservation. Kino, after continuous appeals to the Spanish officials, was able to establish two defense stations with soldiers, who fought in co-operation with the Sobaípuri and Papago against the Apache, but this did not stop the raids. After Kino died in 1711, Spanish efforts to repel the marauders almost ceased. They remained a menace until finally subdued by the United States Army in 1885.

The Apache raids had extensive effects on the Papago. It is most probable

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[9] Some had already started to move west in Kino's time (Bolton, *op. cit.*, p. 395). The mission at Guébavi was abandoned in 1784; that at Tumacácori in 1820 or 1825 (Gerard Decormé, *Obra de los Jesuitas mexicanos*, p. 430).

175 648 that before this time the Papago had lived in rather small villages, spending the summer in the valleys where they planted and harvested their crops, in the winter returning to the mountains where the water supply was assured. As their homes were threatened, they began to abandon the small settlements and to gather together into large defense villages, building forts and terracing the hills, though they still had to follow their migratory cycle in order to exist. They had to learn to live closer together and to co-operate among themselves and between villages in fighting the night attackers. They began, too, to develop supernatural sanctions for fighting and killing the Apache, a system of beliefs and practices which was of vital importance for survival in that period. A few of these beliefs still remain.

Not much is known of the Papago for a number of years after Kino's death in 1711. The Apache continued to raid. The Papago protected themselves as best they could and at the same time learned to utilize the horses and cattle they had acquired: horses simplified their transportation problem, and cattle added a source of meat. The wheat added to their food supply—when it was not burned or stolen by the enemy.

175 797 Missionaries were few in northern Sonora, for the life and problems were difficult. For about thirty years the Papago saw no priest, though work was revived along the Santa Cruz and the missions of San Gabriel de Guébavi and San Xavier del Bac were refounded in 1732. In 1736 Father Sedelmayr went to Tubatama. He wrote that many Papago came to work for him, reconstructing the old missions; they were nothing but skin and bones when they arrived, but they left "fat and instructed." This Father made two trips through the Papago country. In 1752 there was an uprising of the Lower Pima and southern Papago against the Spanish. It was bloody but short-lived, and thereafter the Indians were not so docile or so friendly toward the whites.

After the expulsion of the Jesuits in 1767, the Franciscans took up their work. Between 1769 and 1774 Father Garces made three trips to the desert, recommending the founding of two missions. One stone-and-mud chapel was built east of the Santa Rosa Mountains, and the Father from San Xavier visited there infrequently prior to 1827.

175 794 It is possible that during this period the Sonora Catholic church, a sect without organization or official connection, had its beginning among the Papago. For its devotees, religion was an individual matter of owning pictures of saints and saying prayers—in short, of worshiping as well as they knew how in the Catholic way, learned from brief observation and practice. The Catholic missionary procedure is not to eradicate former religions but rather to reinterpret them. In this case, the Fathers had little opportunity even to reinterpret,

175 794 and elements of Catholicism were incorporated by the people themselves into the whole set of existing religious and ceremonial practices.

In addition to domestic animals and crops, which permitted an easier existence 175 in the desert, and a brief glimpse of the Catholic religion, the Papago took from the whites during this period two social institutions, the governor and the whipping post.[10] It is probable that the Papago villages had had headmen before the arrival of the Spaniards, and they certainly had ceremonial leaders, but concentration of power in one official as the Spaniards knew it was alien to Papago character; hence the appointed governors had little power. Whippings were administered as often for violations of Papago ceremonial tradition as for offenses against Spanish law. In any case, the basic institutions of the Papago—the family and the village—were untouched by anything introduced from Spain.

It was the thirty years of revolution which culminated in Mexican independence from Spain in 1821, rather than direct Spanish social influence, that brought about the farthest reaching changes in the Desert People. In the southern part of the present Reservation area, these years, as Underhill remarks, "involved as much change for the Papago as the century preceding. There was skirmishing in Papago country; Papagos were given guns, horses and food for their help against counter revolutionists and against the Apache; Papago villages were broken up and there was racial intermixture. This affected only the south of the area, part of which is now in Mexico. But where it occurred, it was a potent factor in breaking up residence, causing the loss of clan affiliations and even of clan names and the abandonment of ceremonies because there were no longer villages to conduct them. It seems to have been at this period that the southerners began to build Mexican houses of wattle and daub."[11]

In the northern part of Papaguería there was not much change until contacts with Americans began. On a calendar stick[12] is mentioned a "war with Mexi- [211] cans" in 1842[13] and several raids by Apache, but the Gadsden Purchase in 1854 went almost unnoticed, the Indians scarcely realizing that their land was being cut through by a border survey. For almost two decades they were largely unaware that they had officially become "Americans."

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[10] This paragraph and the following are largely from Ruth Underhill, *Social Organization of the Papago Indians*, pp. 201 ff.

[11] *Ibid.*, p. 202.

[12] A narrow stick, a yard or more long, on which are carved geometric designs to remind the owner of specific events. Usually one outstanding event of each year is recorded, but some years are not represented. The stick referred to here was recorded by Mrs. L. C. Bennett from a man at Covered Wells, who inherited it and its story from his grandfather.

[13] See H. H. Bancroft, *History of North Mexican States and Texas*, p. 659.

UP TO THE PRESENT

EARLY RESERVATION DAYS

The third period of tribal history begins in the early 1870's when the Papago 175 were placed under the jurisdiction of the Indian Agent on the Pima Reservation. In the beginning of this period the Desert People were still living almost as they had before they ever saw white men. At the end of it (about 1933) many individuals had already made an adjustment to white culture, and they foresaw that the tribe as a whole would also have to make a similar adaptation.

When the Apache wars ended, far-reaching changes began for the Papago. 175 According to the calendar stick, in 1872 "the Apache were civilized," and in 1876 "the Papago made peace with the Apache." 361 Actually the Apache were not subdued until 1885, when Geronimo surrendered to General Nelson A. Miles, but after the 1870's the marauders were kept busy by the American troops. No longer forced to protect themselves in the large defense villages (there seem to have been about eleven of them),[14] the Papago once again began to spread out. Many returned to the villages where their fields were and took up again the old cycle of planting and harvesting, going back to the mountain villages when the ponds went dry. Others, in search of new fields or better stocked hunting grounds, sought new sites as they still do today. It was usually a small group of close relatives who established these new villages, and that is why almost all the people in a village are related. The old people still know the defense villages from which their parents or grandparents came, but the relation between defense villages and modern settlements is not yet entirely clear, particularly in the western part of the Reservation.

In interpreting the relation between defense and later villages, it is important 175 to note that, in general, the people from each of the centers seem to have a 197 distinct dialect accompanied by certain character and cultural traits recognized by all the Papago. Specifically, there are six dialect groups on the Reservation living in definable areas. The people speaking each of these dialects came from one defense center, in some cases two or three neighboring centers. There are also people who speak what is recognized as a mixture of two contiguous dialects, and several of these mixed dialect groups also had their own defense centers. To judge from the cohesiveness of the dialect groups, they must have long felt themselves to be distinct entities.

There were other movements among the Papago during this period. The

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[14] J. W. Hoover, "Generic Descent of Papago Villages." Hoover also includes Quitovac as a "mother village" (as he calls the defense villages) of the "Sand Papago," but the villages descendent from Quitovac probably represent a migration into the United States rather than an effect of the vanquishing of the Apache.

There were other movements among the Papago during the period. The
175 166 date is uncertain, but perhaps around 1780 a group of Indians who were forced out of land along the Santa Cruz River north of Tucson settled near Kohatk or Sif Oidak and spread out from there; these people today are a distinct dialect group. At some time, perhaps after the Apache raid of 1848, it appears that the Sobaípuri left the old village of Bac where the Mission of San Xavier had been established,[15] and this village and the surrounding rich river lands were repeopled by Papago from the village of Achi.[16] As white people also coveted this land at San Xavier, in 1874 it was made a reservation under the jurisdiction of the Indian Agent on the Pima Reservation. In 1880 the people from Ahak Owuchi (Horn Lying) in the northwestern part of the present reservation migrated to work on the railroad at Gila Bend and stayed on the land along the Lower Gila River; a small area there was made a reservation in 1882. Others from the same village went to Akchin on the Maricopa Reservation.

Another movement was that of the Papago from Mexico to the United States. The missionized Papago (Kino's "Pima proper") intermixed with the general Mexican population, except for a fairly large group which maintained its identity and moved north. This was probably a progressive movement, over many years, started by the pressure of Mexicans settling in the Magdalena and Altar valleys and continuing as ranchers took over the range and water holes closer and closer to the border.[17] It is known that many people now living in the southern part of the Reservation (also a distinct dialect group) were born in Mexico.

Another migration in the early 1920's was that of the "Sand Papago" from the area around Sonoita into the southern Gu Vo District around Menager's Dam. The Sand Papago, who may once have been the Soba who moved north, had settled mainly around Sonoita, Ajo, and Yuma.

Thus the period was one of stir and movement. Today, ruins of many villages on the Reservation are silent proofs of these movements, but our knowledge of them remains nebulous.

In addition to these permanent moves, the Papago began to change the pattern of their old seasonal migrations. They had always lived in an economy of scarcity, and in bad years food was likely to be very scarce indeed. It was per-

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[15] *Ibid.*, p. 259. It has been suggested that the Sobaípuri, after having been pushed from the San Pedro to the Santa Cruz River by the Apache, moved on farther west and joined the Gileños to form what is now the Pima tribe on the Gila River.

[16] Underhill (*Papago Calendar Record*, p. 16) says that the Soba Jipuri were decimated by disease and that the Papago moved in afterward.

[17] There are traditions of actual fighting between Papago and Mexicans in the 1870's and 1880's, though earlier fighting has been mentioned.

haps in this period that Papago from the northern villages began to go up to the 166
Pima country to help the Pima harvest their abundant crops of wheat, while 175
those in southern villages went to the ranches in Sonora. The young people of today say that their grandparents went on these treks in their youth.[18] These contacts with Mexicans and Pima are still evident on the Reservation, and some Papago say that Spanish prayers and fiestas, with their Mexican music and instruments, were introduced among the Desert People at this time.

About 1880, prospectors began to discover copper, silver, and gold in the 175
Papago country. Many small mines were opened in this area, and mining towns at Quijotoa and Jackrabbit in the central and north-central parts of the present Reservation are said to have attained populations of five or six thousand, with regular stagecoach service, post offices, and at least one county school. The Indians watched this influx with both fear and interest. Some of them moved in to work in the mines; others moved away. Though most of the mines were abandoned after ten or fifteen years, the Indians benefited by the miners' improvements of springs and wells. The great mine at Ajo, which was opened at about the same time, has remained in operation, as have a few small mines in the area.

Not long after the miners, ranchers began to see possibilities in the Papago land. Several moved in and established large cattle ranches, one on an old Spanish land grant. Another rancher, who claimed that the Indian chief at Gu Achi had deeded to him in 1880 all the land bounded by the Santa Cruz, the Gila, and the Colorado rivers and the border, sold portions of that huge territory for large sums of money, gambling on the chance that the Supreme Court would validate his claims. The Court did not do so.[19] Some Indian villages were endangered by various other white encroachments, and, to protect them, reservations were created in 1911 and 1912 in three small sections in the northern part of the present Reservation, and one under Baboquivari Peak.

For the most part Papago lands are still the property of the tribe as a whole. 175
In 1891 the Allotment Act, by which Indian lands were allotted to individuals, 423
was applied to the San Xavier Reservation, but not until 1911 was a move made to allot other Papago lands. At this time sections around the principal eastern Papago villages were apportioned into individual holdings of 160 acres on a township-and-range basis, with no regard for hills, washes, or usability of the land. It was fortunate that only one out of 2,700 proposed allotments

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[18] In 1848–49 the people from Gu Achi and Havana Nakya went to Mexico to harvest beans (Underhill, *Papago Calendar Record*, p. 20).

[19] Sells Agency Files, No. 360. "Papago Indian Lands—Arizona."

175 was approved before allotment activities ceased in this area in 1912; otherwise the same confusion would have resulted among the Papago as is common
423 on many reservations.[20] As it was, the proposed divisions started feuds and factions among the people.

These various and sporadic attempts to protect Papago land and resources against white encroachment and to establish Indian ownership after the white fashion covered a period of more than forty years. It then became apparent that such a haphazard system offered no protection to the main body of the tribe who lived outside the reserved areas. In 1917 a reservation was established to include most of the land now occupied by the tribe except "the Strip," which separated the northern third of the area from the southern part. In 1931 this land was purchased, and in 1938 an area to the southwest known as Menager's Tract was bought. These and several smaller additions brought the Reservation to its present size of 4,500 square miles. With all their lands thus formally designated as a reservation, the Papago acquired the rights, protection, and inconveniences with which most other Indians in the United States had long since been acquainted.

175 One of the usual features of reservation life—education for Indian children
✓ 872 —was not new to the Papago. Since about 1890 there had been opportunities to go to non-Reservation boarding schools operated by the government and
184 various church groups. A surprising number of adults on the Reservation today spent five or ten years in the Presbyterian mission school in Tucson or at a government Indian school in Phoenix, Arizona, Grand Junction, Colorado, Chilocco, Oklahoma, Carlisle, Pennsylvania, or Riverside, California. Since these students came largely from the southern and eastern districts of the Reservation, many of the people in these districts can speak English. The area is "progressive" in American ways and supplies many of the leaders of the tribe, who have some understanding of Western culture. The majority of these students came home and made a satisfactory adjustment, "returning to the blanket" in that they reintegrated themselves with the old culture, but also bringing back with them certain new values which are obvious today. This amalgamation of new and old makes the eastern and southern districts different from the western and central sections, where none of the older generation ever went away to school. With the establishment of the Agency at Sells in 1917, the first government day school was founded. This brought the problem of schools very close to home—often in the face of strong local opposition.

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[20] On the small San Xavier Reservation, for instance, most of the allotments are at present in heirship difficulties, and one individual's share runs as small as 1/250 of an acre (United States Bureau of Indian Affairs, *Progress, Papago Reservations, Arizona*, p. 4).

The new Papago Agency began to have other marked effects on the life of the Desert People: wells were dug in several villages; the hospital was built; the Indian court was established. The Indians did not like some of the agents and their policies and did not hesitate to say so. In one case they organized politically and fought an agent so successfully that he was removed (see chap. vii). 175 657

This period saw also a renewal of Catholic missionary work which had lapsed during the nineteenth century. For several years after 1908, brief trips were made to Gu Achi by various Roman Catholic priests who were stationed on the Pima Reservation. In 1915 a resident priest was given jurisdiction over the area, and he made his headquarters near Ko Vaya (Cobabi). In 1923 Father Bonaventure Oblasser moved the headquarters to Topawa. One or sometimes two priests served the Reservation for the next decade, carrying on the work of the church and directing its mission schools, which were taught by young Papago. Visits were seldom made to the westernmost part of the Reservation, and it was not until the 1930's that an increase of personnel brought an expansion of Catholic missionary work. 175 797

Systematic Protestant missions to the Papago started in 1910, when a Presbyterian missionary began to make regular trips to the Reservation.[21] By 1912 a church and school of that denomination were established at Indian Oasis, which is now Sells. Two years later a church and school were set up at San Miguel, and, in 1920, churches were built in Vamori and Topawa. Some older Sonora Catholics were converted; often their children were in boarding school, and word was sent that the children should now attend Presbyterian Sunday school instead of Catholic services. The third generation of Presbyterians is now beginning to grow up, and the membership, a minority on the Reservation, remains mostly in the families of the eastern districts who were first converted. Today many of the most active tribal leaders are of this faith.

THE NEW ERA

The two main causes of the changes that took place in the fourth period of Papago history, which began in the early 1930's, are the Civilian Conservation Corps and the Indian Reorganization (Wheeler-Howard) Act. These changes have been accelerated to a great extent by World War II. 175 657

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[21] The Papago say that about 1900 some Mormons came to Topawa and "dipped" a few people; they did not continue their missionary efforts, and the Papago who had been converted to the Mormon faith later became Presbyterians. About the same time, one Papago informant says, a few Indians were converted by a Negro woman who preached a life of poverty and sharing and called her followers "Israelites." Carl Lumholtz (*New Trails in Mexico*, p. 40) writes that this was a part of a revivalist movement started by the "prophet" Dowie. The converts later became Presbyterians.

175 657 Civilian Conservation Corps work began in 1933.[22] At first the Papago would not work very willingly on these projects, and the old people opposed the idea of the young men earning money—they predicted correctly that young people would come to disregard parental authority, begin drinking, and get into trouble. However, many of the Papago men, both young and old, became interested in the projects, and before the CCC was liquidated in 1942, about one man in each twenty families was doing CCC work. This was a rather small proportion as compared with some Indian tribes and other sections of the country, but it was a great increase over the initial response. The projects were of practical value to the Reservation as a whole: roads were built to places that had been inaccessible except by horse; *charcos*[23] were put in, and deep wells were drilled, which allowed the people to live the year round in the valley villages. Furthermore, the projects benefited the workers, for they learned new skills and methods which they have since used to some advantage.

175 578 185 Yet neither the public works nor the wage-work economy were accepted wholeheartedly by all the Papago. Some of the villages, particularly those in the western districts, bitterly opposed the improvements, although since then the people have begun to use them. There was disagreement over the use of the water, over individual, community, and government wells, and there were bitter fights with some of the already established Indian cattle owners, who stood by their customary rights. A conflict also arose, as the old men had predicted, from the money that came in as it never had before. Young men could now buy food and need not be tied down to the fields; they could be independent of their fathers, who had previously supplied the knowledge and direction which it took to earn a living. Road construction and the acquisition of cars directly abetted this new independence.

175 657 In 1935 the Indian Reorganization Act was placed before the Papago. The Indians always had village organization (see chap. v); the agents had councils, and there had been purely Indian committees for particular purposes (see chap. vii). But now the whole Reservation was to be organized on a democratic basis, with equal representation in council. When the plan was placed before them, the people approved, though few understood what it meant. Under tutelage of the government and with suggestions from a group of Indian delegates, a constitution was drafted. The Reservation was divided

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[22] This work, first termed Emergency Conservation Work and subsequently Civilian Conservation Corps—Indian Division, was financed from CCC funds and administered by the Indian Service. It was not limited to young unmarried men and veterans as in other parts of the country but served rather as a general work relief program for Indian men.

[23] *Charcos* are natural ponds, deepened and diked.

into districts, and the boundaries were fenced; elections were held. Since 1937 175
the Papago Tribal Council has been meeting regularly and handling much of 657
the business of the tribe, with suggestions and guidance from the Agency. The Council still does not have the support of all the Papago, but there is more co-operation now between the people and the federal government, as represented by the Agency, than ever before.

While tribal organization was being changed, the Roman Catholic church 175
reorganized its missions. Instead of one priest for the whole Reservation, there 797
are now six, with two at San Xavier. Sisters came to teach. There is a concerted, yet slow and cautious, effort to bring the Sonora Catholic Papago into the fold of the church and to wean them from some of the older practices, such as the Indian marriage customs. On the surface these efforts seem to be partially successful, but such endeavors take time. In 1943 the Presbyterian missions also began a reorganization.

With the advent of war, Papago were drafted, and both men and women 175
began to leave the Reservation in large numbers to work in the cotton fields, 464
ranches, mines, railroads, and airplane factories. The effect of this new work pattern will be far-reaching. If the people become thoroughly acclimated to wage labor and then suddenly face an economic depression, the effects may be tragic for them as for other minority groups.

With all these forces at work on the Reservation it might well be asked: 181
What is left of Papago culture? A few members of the tribe have become Americanized, but the majority are still very much Papago. The old culture is strong, although it seems on the surface to have changed a great deal. Many of the old customs and beliefs still dominate the peoples' lives today, not because the Papago want to reject new things but just because, to them, the old way is "the way to do things."

Yet there is no rigidity in the Papago adherence to their old ways. Adaptability seems to be a fundamental part of Papago character; indeed, existence in the desert, with its extremes of heat and cold, drought and flood, want and plenty, requires adaptability. From their first contacts with white men, the Desert People began to take from white culture what appealed to them. The white men came as allies, not as conquerors, and there was no catastrophic conflict. The Papago were always fairly secure in the ownership of their land, and no overwhelming force was exerted on them to change their ways, hence there was no reason to close in upon themselves as did the Pueblo and the Yaqui Indians. Thus the Papago were able, without deep emotional conflicts, to add to their own culture many of the values and traits of a foreign way of life. In the following chapters we shall see what the results have been.

Chapter III

MAKING A LIVING IN THE DESERT

241 IT IS obvious to the casual visitor that, even today, making a living in Paguería demands continuous hard work and careful use of every available resource. Up to the eighteenth century the Papago were semisedentary farmers, who supplemented agriculture with hunting and the gathering of wild plants. Their way of life depended upon making the best use of rainfall and run-off, for the few year-round sources of water were in the mountains. Corn, beans, and squash were planted in small fields in the valleys where the washes fanned out, and, when the July rains came, the flash-flood waters spread over the ground. In many places flood waters were led from the wash to the fields by short ditches, but year-round irrigation was not possible because the washes ran only after a heavy rain. As noted in chapter ii, there is some evidence of an effort to canalize water from the mountains to the fields.

312 The people could remain in the valleys as long as there was water in the
221 *charcos*—which were the only source of water except the flood waters of the washes. When the *charcos* dried up, the villagers moved back to the permanent springs or shallow wells in the mountains. In September and October the Papago harvested their crops, dried what was not immediately used, and stored it in baskets which could be transported easily.

Wild plants were an important supplement to field crops, and from April
222 through September much time was spent in gathering them. In the spring the cholla cactus buds were dried and stored, to be boiled and eaten later. In April a kind of wild greens matured. In May and early June came the important saguaro harvest, when families camped in the foothills and picked the juicy fruit from the tops of the tall cacti. Some they ate fresh, and some was dried whole to be used later as candy, though the greater part was boiled down into jam or syrup, and stored in jars to be used as sweetening or to be fermented into wine during the rain ceremony (see chap. vi). In July and August some of the people crossed the Baboquivari Mountains to the high grassland and

222 oak country to gather acorns. In August another variety of wild greens was ready to eat, and, finally, in September the prickly pear ripened.

224 Without domesticated animals, the Desert People depended on wild life for their meat, which they dried and stored or ate fresh. All through the year the hunters went out after bighorn sheep, deer, peccary, and rabbits.

461 This was a way of life in which everyone had to work in order to eat. Someone had to sow the seed or protect the crops while others were gathering wild plants, and, while some of the family were gathering acorns or saguaro fruit, others might be off hunting. And always there was the work at preparing food for eating or storage, making clothes and utensils, and the general business of keeping a family going; small wonder that industry was thought of as a cardinal virtue, for the lazy man would starve and bring others to the verge of starvation. Nor is it surprising that families were strongly cohesive, that they included people other than father, mother, and children, or that babies were welcomed. The more hands, the more co-operative work, the more food. We shall see later that these values remain powerful factors in Papago society today.

FIRST WHITE INFLUENCES ON PAPAGO TECHNOLOGY

177 When Father Kino came up from Mexico in 1700, he brought cattle and horses, oxen and wooden plows, wheat, peas, lentils, and *garbanzos*. These the Papago accepted according to their own pattern. It is possible that they simply turned the cattle loose and hunted them much as they had always hunted deer.[1] At any rate, for years there were semiwild cattle in the southern and eastern parts of what is now the Papago Reservation. The wheat and legumes fitted more naturally into the Papago pattern. They were planted in winter in the same fields used in summer for corn, so that there were now two growing seasons instead of one, which somewhat regularized the food supply.

231 422 Horses were very useful, easing the difficulty of the semiannual treks from mountain to valley and return and shortening the traveling time between villages. However, like many other tribes, the Papago attached to the horse a value quite out of proportion to its usefulness, and ownership of horses became a source of prestige. Horses and cattle were individually owned, in contrast to land, to which an individual had a right only while he was using it.

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[1] Ruth Underhill, "Acculturation at the Papago Village of Santa Rosa," p. 12. In contrast, a group of Indians in northern Mexico closely related to the Papago, who were completely "missionized," used white methods of handling stock; yet they violently resisted white encroachments, even to the point of bloody revolt.

231 422 Thus the concept of individual ownership began to infiltrate established concepts of use-ownership by the group.

231 177 Horses also made possible further contacts with white ways. When crops failed in Papaguería, the Papago of the southern villages often rode down into Mexico to work for ranchers. There they learned something of white methods of livestock care but, more important, were introduced to the idea of working for pay. Payment was always in kind—seed, knives, or other necessities—but the situation was quite different from co-operative labor for group subsistence. People in the northern villages who worked for the Pima Indians, whose irrigated fields produced plentiful harvests, were paid in grain.

177 Thus, well into the twentieth century, Papago ways of making a living remained fundamentally unchanged. The Desert People became familiar with the white man's use of domesticated animals, his grains, and his traditions of individual ownership and paid labor; but these things did not violently disturb their way of life. Papago life went on, little changed from its course during the last three hundred years.

THE RESERVATION ECONOMY

177 With the establishment of the Reservation in 1917, and particularly with the change in Indian Service policy in 1933, the shape of things began to change in Papaguería. In the shift from an economy of only semisedentary farming with a few half-wild cattle to one of agriculture, livestock, and wage labor, the government has played a leading role.

The improvements necessary for this shift have been made or supervised by the Indian Resources Branch of the Agency staff, consisting of the Soil and Moisture Control, Forestry and Grazing, and Extension departments, and by the Engineering Branch, including Roads, Irrigation, and Construction and Maintenance departments. Their job is to show the Papago how to utilize his own limited resources most efficiently and to assist him in developing new ones.

177 491 The building and improvement of roads and trails have been important contributions to Reservation economy. From 1933 until 1943, seventy miles of primary road and forty miles of secondary road have been constructed by the Roads Division. The CCC constructed nearly two hundred miles of truck trails. But, according to Agency estimates, less than half of the needed roads have been built, and thirteen of the thirty-six villages of more than fifty inhabitants have no roads.

177 312 To improve the water resources of the Reservation, the government drilled deep wells at many villages, thus assuring a year-round water supply and

making unnecessary migrations between valley and mountains. *Charcos* were 177
built or improved, small dams erected in water courses, and other improvements made in water conservation, under the supervision of both the Engineering and the Resources branches. 312

In this arid country without year-round streams, large-scale irrigation must come from deep wells; this is possible in only very limited areas on the San Xavier Reservation and at Chuichu at the northern tip of the main Reservation. There is some use of *"bolsas,"* diked fields to which water is brought from washes or arroyos by ditch and allowed to stand and seep into the soil, thus insuring moisture for a crop, but most Papago families have flash-flood farms much like those in use for centuries, watered naturally by the spreading floods. To others water is conducted through ditches;[2] at Menager's Dam in the southwestern corner of the main Reservation sixty acres are now under ditch irrigation.

Perhaps the most important departure from old ways of making a living 231
came through efforts of the government to make livestock the basis of the 177
Reservation economy. The improvement of the water supply was intended to be the first step in this direction. Papago methods of handling (including those learned from early government officials) had greatly depleted a range that was originally poor. Up to about 1930 range use was irregular, and cattle moved from water hole to water hole, overgrazing the surrounding areas.[3] This overgrazing caused the disappearance of perennial grasses and their replacement by growths that offer poorer forage and do not hold the soil, thus starting serious erosion.

The Resources Branch has set up experimental farms and nurseries to determine the usefulness of various grasses and plants for this area. By such experiments it is hoped to develop plants that will hold the soil and provide good forage.

The effects of spotty range use were aggravated by the fact that the Papago ran far too many livestock. Even as late as 1943, with the more general use of the range resulting from a better water supply and despite a considerable reduction in stock, the number of animals being run on the Papago range was about twice its carrying capacity as estimated in 1939. Many of these animals were horses of negligible value.

The Tribal Council, which has seen the necessity for better and fewer

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[2] In line with Carter's terminology, the former method is "arroyo flood farming." The use of ditches is "arroyo flood irrigation" (see George F. Carter, *Plant Geography and Culture History in the American Southwest*, p. 114).

[3] Data in this section are largely from United States Bureau of Indian Affairs, *Program, Papago Reservations, Arizona*, referred to subsequently by title only.

[text continues on p. 33—Analyst]

PLATE III

137

Rosamond B. Spicer

a) End of a drought

312

Rosamond B. Spicer

b) Cattle drinking in a *charco*

WATER MEANS LIFE

[p. 32]

animals if income is to be raised and the range preserved, has been firm in 231
insisting that the number of horses on the range should be governed by the 177
need for them. In the face of much opposition and with the aid of jail sentence for noncompliance, they have seen to it that horses afflicted in a recent epidemic of dourine were killed and a strict quarantine maintained.

Furthermore, many of the flash-flood farms are now endangered by siltation resulting from soil erosion due to overgrazing of range lands. Hence stock reduction and the introduction of better grasses will help even those families which have no stock.

The Extension Department has been of great assistance to the Papago in improving their fields and herds. The latter has not been and will not be an easy task, for to the Desert People cattle are not a source of prestige. Cattle provide food and spot cash, but there is yet little of the attitude of making a paying business of cattle production. Furthermore, the Department will meet with at least tacit opposition for a long time, since white men's methods sometimes run counter to the old beliefs. Many Papago, for instance, think that their range is in poor condition, not because they have too many animals or because of prolonged droughts, but because so many horses have been killed off
in recent years. The horse is endowed with magic powers, and the white men [825]
are only asking for trouble when they slaughter sick animals. Only long and patient education—of adults in the villages and of children in the schools—can dispel superstition. The Agency is well aware of these difficulties, and the staff has made conscientious efforts to explain and to persuade, rather than to compel, progress.

Though the quality of Papago cattle is still in need of improvement, standards have risen measurably in the past decade. Until 1930 the steer with the largest horns was considered the best; and as late as 1937 skinny Spanish cows with a horn spread of several yards, looking like great gaunt deer, still peered from mesquite thickets. Today Hereford cattle constitute most of the herds, and under the tutelage of the Agency ~~the Council~~ has established a tribal herd of registered bulls which individual owners may use to improve the breed.

Cattle is the largest single source of revenue, providing 36 per cent of Reser- 434
vation income in 1940 (the last year before war wages and prices began to dis- 231
tort the normal picture), but agriculture is still the backbone of the Papago 241
economy. Over half the twelve hundred Papago families do not own any cattle at all, and only a sixth obtain more than fifty dollars from this source in a normal year. On the other hand, almost all families do some farming. The estimated cash value of the products is small and forms only a sixth of

[Text continues on p. 35-Analyst]

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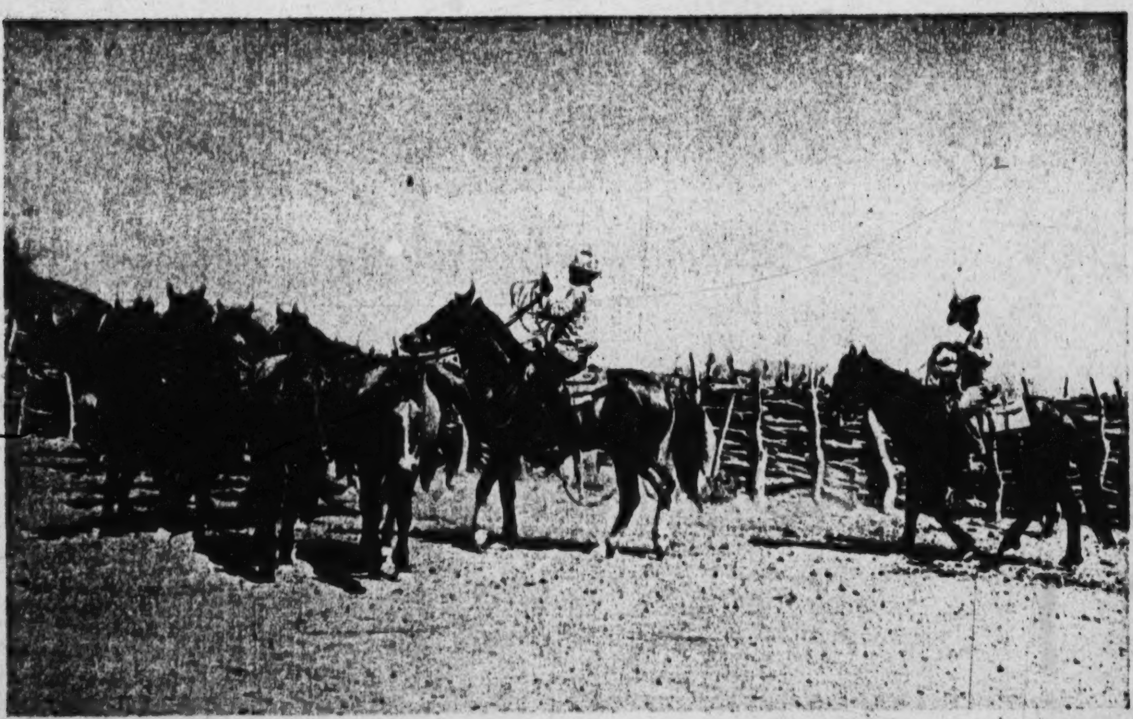
PLATE IV

[p.34]



Chuck Abbott

Rounding Up the Horses in the Corral

total Papago income, but farming furnishes basic subsistence for over three- 434
quarters of the families on the Reservation. It is now believed that cattle will 231
never be fundamental in Papago economy but should be regarded as a [illegible]p- 241
plement to the real basis of Reservation life—farming.

Other sources of income are few. About 6 per cent of tribal income (includ- 434
ing subsistence) is derived from firewood and fenceposts cut from mesquite. 313
There are known small deposits of gold, silver, lead, and manganese on the 316
Reservation, but they are in the hands of whites and offer nothing but a little employment to Indians, as the Papago have only surface rights to their land, and any mineral rights belong to the federal government. (Any miner may acquire rights on payment of rental of the land and fees for destruction of property.) This is a sore point with the Papago, since they are the only Indians who do not have rights to minerals under their lands.[4]

Handicrafts furnish a small part of tribal income—about 3 per cent. The 434
bulk of this income comes from the sale of baskets and pottery[5] through the 285
tribal Arts and Crafts Board, which was established under the auspices of the federal Indian Arts and Crafts Board to provide a market for Papago handiwork. Papago baskets, made of yucca, willow, bear grass, and devil's-claw, are of the close-coil type; decorative design in black and white, with occasional green or red, is simple but often strikingly beautiful in its sharp contrasts. Through assisting the Papago to improve their work and get better prices for it, the Arts and Crafts Board should help to raise Reservation income. It should also give the Desert People experience in co-operative business which may serve as a foundation for ventures in other fields.

There are a few small Papago business enterprises on the Reservation, most 434
of them trading posts, but returns from these stores are a minute fraction of [441]
tribal income. An increasing share of Papago income is from paid labor. As 464
previously stated, for generations the Desert People tided themselves over lean years by going to Mexico or to the Pima country to work for ranchers or farmers, who paid them in food and seed. Now, however, wage work (and cattle sales) are shifting Papago economy from a barter to a cash basis. Em-

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[4] The reasons for this anomalous situation are partly political. Under the Gadsden Purchase Treaty of 1854, the United States agreed to respect the laws and customs prevailing in the area under Mexican rule. Since Spanish days, mineral rights had belonged to the crown or the state. For two years (1932–34) Papago lands were withdrawn from mineral entry and claim, but renewal of the treaty provisions was made a part of the Indian Reorganization Act of 1934. Papago resentment is understandable, since some other Indian tribes derive substantial income from mineral leases. Known deposits on the Reservation are small, but there is always the chance of discoveries, since great copper deposits are being worked near by.

[5] The Papago also make rawhide ropes, wooden spoons, and other articles, chiefly for their own use.

[Text continues on p. 37-Analyst]

PLATE V

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285
291
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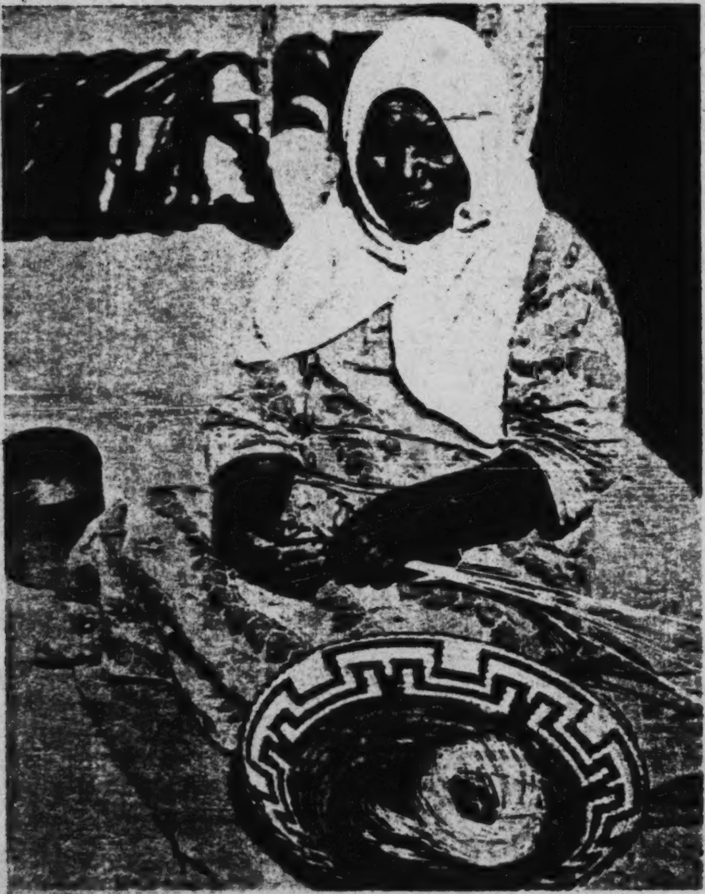

Chuck Abbott

PAPAGO BASKETMAKER

[p. 36]

ployers are the mining companies (chiefly at Ajo west of the Reservation), 434 surrounding ranchers, and the foremen of the cotton fields along the Salt, 464 Gila, and Santa Cruz rivers. Work in the cotton fields is largely on a family basis, but individuals work in the mines and in households in near-by cities. During the war there was an increasing demand for Papago labor, and some went to distant points to work in factories of all kinds. The government is also an employer: the Agency hires over a hundred Papago as clerks, bus-drivers, school housekeepers, range riders, and in other capacities, chiefly as unskilled laborers.

Even with the addition of wages, Papago income is very low. In 1940, before 434 war wages had swollen the total, the average family income (including esti- 511 mated value of products used by the family) was about $530 per year, but this does not present a true picture, for two-thirds of the families had incomes of only $265 or less. The more prosperous third, whose incomes brought up the average, were those with cattle, permanent jobs, or private business enterprises, most of whom lived in the southern and eastern districts. In 1943, war jobs, military allotments and extensive cattle sales forced by the drought brought average family income up to about $1,200, but this is obviously a situation unlikely to be duplicated.[6]

THE FUTURE OF PAPAGO ECONOMY

We have seen that the Papago live in a rural peasant economy which has 439 only recently shifted to a cash basis. Money is increasingly important to the 441 Desert People because they no longer produce most of their own food and clothing. A recent study of Papago food habits showed that over half the food used in the period of the study was purchased.[7] Even beef is often sold, and meat is bought.

Many things are imported which could be produced locally. There is a flour mill on the Reservation, but all flour sold at trading posts is imported. Though cattle-raising is the chief Papago cash industry, all the meat sold in two of the three Reservation stores handling this product is imported.

Almost all business on the Reservation is in non-Indian hands. A recent report states: "It is estimated that of every $100 that is received by the Papago, some $50 goes immediately into the hands of businessmen off the reservations. Not only does $90 out of every $100 received from the export of produce, cattle,

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[6] It is interesting to note that in this year the Papago *family* income was not much above the average *per capita* income for the country as a whole, $1,031 (Charles F. Schwartz, "State Income Payments in 1943," Table 1). For the state of Arizona, per capita income was $805.

[7] Emma Reh, "An Economic Study of the Papago Indian Reservation, Arizona" (MS).

439 and labor go immediately for the import of food and clothing, but the 25 per
441 cent of this amount which represents the retail profit is lost to the Indians."[8]

The Agency has proposed that Reservation stores should be either co-
657 operatively or individually owned and run by Indians and stocked through large-scale co-operative buying. This would provide both better goods at lower prices and employment for Indians.

The government has also encouraged the Tribal Council to set up a Fair and Rodeo Board, which has constructed buildings and grounds for tribal fairs. A Loan Board has been established to lend money to stockmen and farmers.

Other improvements in Papago economy have been suggested by the Agency staff or the Tribal Council. Recently the council requested the opportunity to resettle several hundred families on Indian lands along the Colorado River which are to be opened to other tribes. (Whether families can actually be persuaded to relocate is problematical.) The Agency has plans for bringing in water to certain areas, conserving present resources by introducing new types of plant growth, and acquiring the use of range lands outside the Reservation. These plans, however, depend upon considerably increased appropriations of federal funds.

181 It is obvious that, with what have been termed the poorest natural resources of any Indian reservation,[9] with rapidly increasing population, and with no immediate prospects of more land, the Papago must conserve and improve what resources they have if they are to go on living in their desert country. Despite this critical situation, the Papago are not a harried people. They do not feel the urge to outdo their neighbors which often creates frustration in a completely competitive economy. Their standard of living and the satisfaction they derive from their way of life cannot be measured in terms of dollars and cents, though they are coming to feel the necessity for cash and to value the things it can procure. Nor do they have the sense of being hemmed in, and the consequent bitterness against their white neighbors that is characteristic of many Indian tribes whose lands have been steadily reduced. The Papago are aware that the government in many concrete ways has made easier their life in a hard environment. This is not to say that white American civilization has not brought conflicts, has not disturbed the old ways of life. But the Papago still live on the land that has been theirs for centuries, and they do not feel it threatened by white encroachment.

And this is important because their land is all-important to them. All the Desert People—even those who leave the Reservation to take jobs—keep their roots in the land. They always have their family, their village, their fields to return to. The desert is still their home. To most of them it is still important whether rain comes or not; on the Reservation or off it, they watch carefully the fleeting clouds and are worried and restless when no rain falls, when the desert begins to look brown, when seeds will lie dormant under the soil or unused in the storehouses. And they feel happy when the rains come—soft and cold in the winter, in sheets in the summer—for the rains mean a desert green and beautiful with grass and flowers, plenty of corn and beans and squash at the harvest, and horses and cows that are fat and healthy.

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[8] *Program, Papago Reservations, Arizona*, p. 43.

[9] *Ibid.*, p. 51.

Chapter IV

THE PAPAGO FAMILY

342 352 HOME to a Papago is a small cluster of low, earth-colored buildings in a clearing encircled by creosote or mesquite bushes and cacti. The house is commonly a one-room structure, but there may be several rooms or, if the family is large, even several small houses. Near by is a ramada, roofed with dry grass and protected on two or three sides by a paling of saguaro ribs or ocotillo branches, which, if watered, may take root in summer and form a wall with green leaves and brilliant red flowers. Here, in good weather, cooking and other household chores are done. Suspended from crotches or pegs in the ceiling beams are bridles and other horse gear, the family washtub, and various domestic paraphernalia. A forked post holds a large olla pottery jar of water from which everyone drinks. (Water is treasured, for it must be hauled [312] by wagon from a well which may be several miles away.) One or more tiny huts serve as storerooms for tools and grain, and space is often set aside for a chicken yard and a corral. In the yard the dogs lie sleeping in the shade of the family wagon.

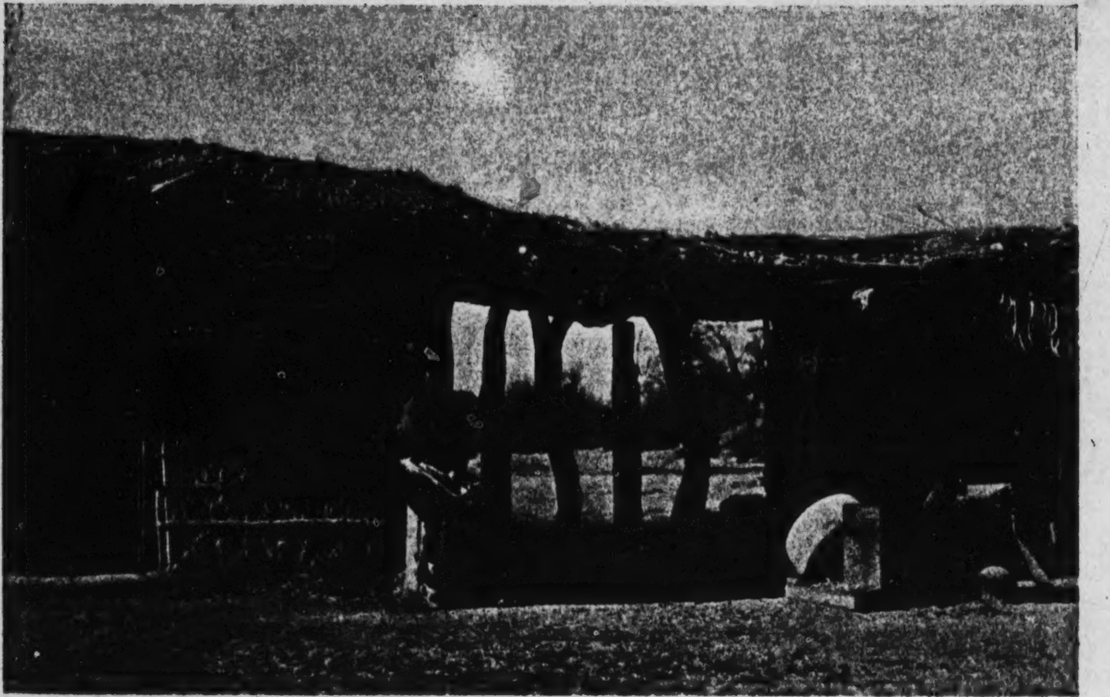
361 The Desert People spend most of the year out of doors. Their personal belongings are kept indoors, and in winter they sleep inside, but at least half 512 the year they cook, eat, work, sleep, and visit in the yard or under the ramada. Nevertheless, there is a high degree of privacy, for the brush and the distance between houses or house clusters allows each family to live unmindful of the neighbors.

312 The old Papago house, a round structure thatched with grass, has not been used in most parts of the Reservation for fifty years. Modern houses are of the Mexican type: wattle-and-daub, adobe, or stone construction. The wattle house, which is built of saguaro ribs or ocotillo branches plastered with mud, can be cheaply and quickly put up by almost anyone. The adobe brick house is more difficult to construct, and usually helpers must be hired, hence the poorer families cannot afford this type of housing. Stone houses, built near accessible rock outcrops, also require considerable labor and skill and are rather rare.

[Text continues opp. p. 42-Analyst]

[p.41]

PLATE VI



United States Indian Service

Resting by the Ramada of a Wattle-and-Daub House
Fireplace is in the right foreground, with squash curls hanging above to dry

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342 556 Thus the type of house is something of an index to the occupant's economic status. In the more prosperous eastern districts, adobe construction has been so widely accepted that a wattle house is a fairly sure sign that the occupants have a below-average income. In the western districts, however, a wattle house is far more often a sign of resistance to white culture. For example, at the time of this study all the houses in two of the most conservative villages in Hickiwan District were wattle-and-daub, regardless of the individual owner's economic status.

The type of house roof is also an index to prosperity or acculturation or both. Despite the fact that a roof of thatch overlaid with dirt is cooler in summer and warmer in winter, any eastern Papago who can possibly afford it will roof his house with wood, tar paper, or tin. There is one advantage in the white man's roof—it does not leak as much as a dirt roof.

The visitor can also see evidence of economic status and of attitude toward whites in the house furnishings. The poorer families and those antagonistic to white culture have dirt floors and few tables, chairs, beds, stoves, glass window panes, and "store" dishes. In relatively prosperous and acculturated
352 homes—considerably more numerous in the East than in the West—house
556 furnishings may include a good stove, a kerosene refrigerator, a washing
machine, and a phonograph or battery radio. In these homes, chairs, tables, beds, some type of stove, and "store" dishes are regarded as necessary for comfort; when families from such homes go to the cactus camp and do without these things, they feel that they are "camping out."

[778] In a Catholic home there is always a little altar, a small table or shelf draped with white. Here one sees *santos* or holy pictures, a candle in a red glass, and perhaps some paper flowers. An alarm clock, a pencil, and other odds and ends are not considered out of place here.

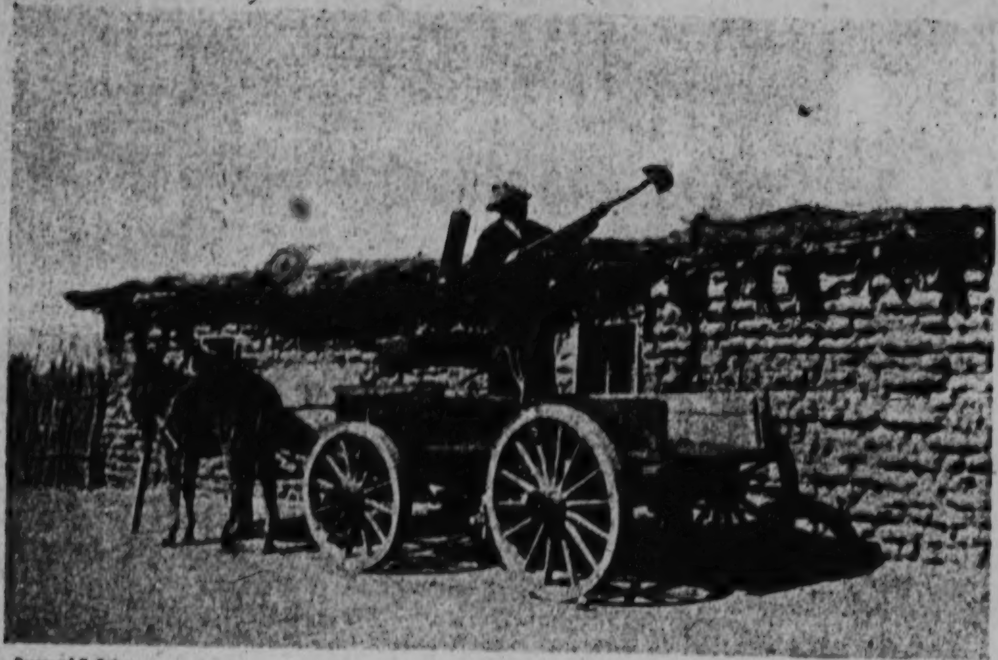
342 [414] All houses and storerooms, however flimsily built, have doors and some kind of lock. Storerooms are kept locked even during the day except when someone is working close by, and houses are locked when the family goes away for even part of a day. "No one from here would steal anything, but a stranger might."

356 515 House and yard are almost invariably neat and clean; even dirt floors are sprinkled and swept every morning. The Papago also values personal neatness and cleanliness. Neither is easy to achieve in this dusty, water-scarce country.

513 Sleeping arrangements vary greatly according to personal predilection. Most people, except the very old, now have beds, but everyone can, and frequently does, sleep on the floor or the ground without discomfort. As a matter of fact, some of the beds are without mattresses or springs; the owners merely

[Text continues on p. 44-Analyst]

PLATE VII



Rosamond B. Spicer

REPAIRING THE DIRT ROOF

[p.43]

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4: Joseph et al D,E-5 (1942-1943) 1949
NU28 Papago NU28

513 push the wide wooden slats together and lay blankets on them. Beds stand in the yard in summer, with the bedding rolled up during the day to keep it clean; in winter they are moved indoors.

264 Eating arrangements are also characteristically elastic. In the eastern districts, where every house has a table and chairs, family meals are the general practice, but no one is concerned if some member arrives late or not at all. Fiestas are the only occasions when group eating seems important.

262 No longer does the desert furnish all the food. Only two wild plants are still important in the Papago diet: the cholla bud and the fruit of the saguaro cactus. These plants are good sources of sugar, vitamins, and minerals.[1] Various seeds and wild greens are still gathered in season, but decreasing use of wild products has followed the introduction of stores on the Reservation, and Papago food is now rather like lower-class Mexican or Yaqui food. The usual three family meals each day are much alike in basic pattern: coffee, tortillas or bread, and some bean or other legume, which "makes the meal." These foods are supplemented by other vegetables and sometimes by meat, cheese, and eggs. Green corn is used in many forms—fresh, or dried and roasted and then ground for boiling alone or with black-eyed beans. Wheat is used in whole-wheat tortillas or bread and as pinole. Squash is boiled or baked, either fresh or dried, and several varieties of peas are also eaten. Principal meats in the diet are beef and chicken, but their use varies with the economic status of the family, for not all have cattle or poultry, and meat in the stores is expensive. Rabbits and other wild game provide additional meat.

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262 The fiesta is the occasion when delicacies are set forth. Fiesta foods include tamales and beef stew, with raisin rice pudding or canned fruit for dessert. Baker's bread and cake are greatly esteemed. Food for the fiesta is carefully planned and prepared, and an effort is made to serve the choicest dishes. In the home, however, it is considered pure ostentation to set too good a table.

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262 Many Papago children show signs of malnutrition,[2] as the modern Papago diet has deficiencies, the most serious of which is in vitamin C. In those seasons when fresh vegetables and wild greens are not available, the Papago eat very few foods which are rich in this vitamin; oranges and tomatoes are not grown on the Reservation and are expensive to buy. Nor is vitamin A very plentiful in the diet. Milk is used almost exclusively in coffee, and the total amount consumed is limited. School children must learn to drink milk, as many adults believe that undiluted it is bad for the stomach. As noted in

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[1] For a comprehensive study of Papago diet see Emma Reh, "An Economic Study of the Papago Indian Reservation, Arizona" (MS).

[2] See Part III of the study.

146 262 chapter iii, most families who own cattle do little slaughtering for themselves and thus do not eat the organ meats and blood which were an important part of Papago diet in the old days. School lunches are helping to supply some of these dietary deficiencies, but experimentation and education will be necessary before home diets are improved.

THE PAPAGO HOUSEHOLD

592 The family is the most important unit in the Papago social structure, whether home is a tiny structure of wattle-and-daub or a five-room house with a shingle roof, wooden floor, refrigerator, washing machine, and radio. Family solidarity is strong. Most often, and ideally, a household consists of the old parents, unmarried sons and daughters, and married sons with their wives and children—three generations in all. But, since relatives may always be depended on for hospitality, the constitution of the household shifts as convenience and necessity require. Any relative is given a temporary or permanent place in the domicile as long as he is willing to assume his share of responsibility for the family livelihood and to fit quietly into the family structure. It is a rare household that does not include a widowed daughter, a distant cousin, a child whose parents have died or remarried; or an "illegitimate" child. Brothers or sisters of the old parents (also regarded as grandparents by their siblings' grandchildren)[3] may also be part of the family. Many and varied are the combinations of relatives who may live together.

593 Thus a Papago child is usually born into a family that includes not merely his father and mother and brothers and sisters but several other relatives. The precise combination does not signify. Whether his grandparents are maternal or paternal, whether the other adults are his aunts and uncles or more distant relatives, a child's family relationships are such that the absence of one particular relative is no deprivation, if there is another who can take his place. Both the child and his relatives are prepared to accept substitutes even in the essential roles.

593 601 Every relative, however, has his proper designation. Some kinship terms differentiate persons who would, in English, have a common appellation. Thus there is a different term in Papago for an uncle who is the mother's younger brother from one who is the father's older brother. On the other hand, the same terms are used for persons who are differentiated in English. Brothers and sisters and all degrees of cousins are called by one of two terms; these terms do not distinguish sex but rather the comparative ages of the speaker and

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[3] Siblings are children of the same parents.

593 601 the one addressed.[4] The old Papago terms are still in everyday use, but a few English terms such as "mamma" and "daddy" are coming into vogue among the more acculturated families, and personal names are more frequently used in addressing relatives near one's own age, when formerly the kinship term would have been used.

601 The Papago kinship terms are not merely convenient designations, for they indicate patterns of behavior among relatives. The cousin who is addressed by the same term as a brother is treated much as a brother. The emphasis on age in the kin terms is directly linked with the Papago principle that the older is always in a position of authority over the younger (which is discussed in Part II of this study).

551 In addition to the kinship terms by which he is addressed and referred to by his relatives, a Papago has at least two personal names. According to an old Papago custom, still followed by some families today, a medicine man gives the child a name, usually one which had come to him in a dream.[5] This name is believed to have magic power and is seldom used in reference or address. A few old people are still known by these names.

In more general use, particularly among the men, are nicknames bestowed because of some personal eccentricity or experience. These names, frequently given to the men by women, may have sexual connotations. Women liked "Women Hobbled Him" and tried to keep him near them; the bride of "No Blanket" left him because he had no blanket; "Spinach" went courting on a green horse. Women also may have nicknames: "School Bus" had her dates near the bus; "Red Shoes" liked bright footwear. "Heron Legs" and "Shiny

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[4] The kinship terminology is of the "Yuman" type. Its characteristics are these: (1) emphasis on distinctions of sex and relative age, the treatment different according to generation; (2) a differentiation of parents from their siblings and of siblings from one another. In the two ascending generations maternal and paternal lines are distinguished as well as sex; sexes are undifferentiated in one's own and the two descending generations. In the first ascending generation, the sex of the person addressed, his age order in relation to the speaker's parent, and the relationship to which parent are all indicated. In ego's generation all siblings are either older or younger than ego. Cousins are addressed as older and younger siblings, the term depending on the relative age of the parents. In the first and second descending generations there are no distinctions in relative age nor in the sex of the person addressed; the only difference between male and female speaking is that the father and mother call their children by different terms, that used by the father signifying "little one" and that used by the mother, "born from my womb." In the grandparent class all are "grandfather" or "grandmother." Thus, in the parent, and aunt and uncle class, the relationship to one's parents can be determined; in ego's generations the relationship to one's self, but in the descending generations only the sex of the parent speaking. The kinship terminology is a reflection of the authority system in terms of relative age and of patrilocal residence. Underhill also regards it as reflecting the sororate and levirate which no longer exist (Ruth Underhill, *Social Organization of the Papago Indians*, p. 39).

[5] *Ibid.*, p. 157.

Pate" (both names bestowed on white people) reflect physical characteristics. Nicknames are commodities after a fashion, for they may be bought or traded. 551 [424]

When a Papago is addressed directly, neither the name given him by a medicine man nor his nickname is used. If the speaker is not a relative, he addresses another Papago by his English or Spanish name or by the Papago term for "friend." Spanish names were given to the Indians by the first missionary priests; they were all saints' names, and no surnames were added. As white men dealt increasingly with the Papago, they found it difficult to distinguish the many Joses, Juans, and Franciscos; so they introduced the Desert People to the system of taking the father's name. Frequently the Indians used the father's given name as a surname; thus a father, son, and grandson might be Jose Juan, Pablo Jose, and Cesario Pablo, respectively. Not all siblings, however, would necessarily take the father's name; five brothers might have five different surnames. Wives might take the husband's surname or retain their own. Whites were further confused by the ease with which Indians changed their names; Juan Francisco might suddenly become Chico Jose. [576] 177 551

When the English-speaking white traders and government employees began to record these Spanish names, they were misled by the Papago pronunciation or by their own lack of acquaintance with Spanish into misspelling or anglicizing them. Thus Moristo has become "Molisto," and Averisto is alternatively spelled "Valisto"; Xavier is written "Havier" or is changed to "Harvey" or "Harris"; Candelaria may be "Condolorey." One well-known surname, Puella, is a white teacher's spelling of a Papago child's pronunciation of his name, Pedro Maria—"Pedlo Malia."

Although census records, school rolls, and registration for rationing and Selective Service have influenced Papago to keep the same name, some confusion remains because there is still a rather strong sanction against uttering names unnecessarily, particularly as terms of address. When addressed by name, many adults will answer with manifest annoyance if at all, and even a child who has been in school for some years will show embarrassment. English-speaking Papago seldom address a white person by name; they prefer "you." But, if a name must be used, it is always the surname with "Mr.," "Mrs.," or "Miss." The formal address is also used with certain Papago in positions commanding respect but never when a kin term might be substituted.

Thus the system of appellation so well defined in white culture is in a transitional stage among the Desert People. The old medicine men's names are dying out, and inheritance of surnames is gradually becoming common. But 551

551 the important names are still the kinship terms, and the nicknames which are a source of amusement and gossip for everyone.

MARRIAGE

581 Marriage is the normal adult state among the Papago. In the old days there were few bachelors and almost no unmarried women. Today there are more single adults, but they are a very small proportion of the tribe, and spinsters
582 are looked upon as something of a curiosity. Girls may marry at fourteen and boys at sixteen, but the usual ages seem to be between sixteen and eighteen for girls and between eighteen and twenty for boys.

584 According to the old custom—practiced in a few cases as recently as ten years ago—marriages were arranged by the families of the bride and groom, usually without consulting the young people concerned. Nowadays young Papago almost without exception select their own mates and consult their parents later. Usually, however, the parent's wishes are followed, although a few young people have braved family disapproval to marry whom they pleased.

582 Apparently the chief prerequisite for marriage is that the young couple be unrelated, a restriction strengthened by the ban laid by the Roman Catholic church on marriage within the third degree of relationship. In recent years there have been several cases of marriage between first cousins without more stringent penalties than adverse gossip, but one such couple in the conservative
[684] Hickiwan District were ostracized by both their families, who said that they were "living like dogs."

Because of this general restriction against marriage between close relatives, young people customarily used to marry outside their own communities where nearly everyone was related. In the larger villages, where new blood has come in and therefore relationships are not so close, many young people who are neighbors marry.

Whatever their birthplace, some Papago say that the bride and groom used to belong to the same dialect group. This was less a result of sanction than of circumstance; before there were many roads on the Reservation and until many people went to work in the mines or cotton fields, Papago seldom met
[186] those of any other dialect group. Even now, though there are many intermixtures of dialect, there is still a strong in-group feeling, and outsiders are teased or ridiculed not only for the difference in their speech but also because
582 of their personal appearance and mannerisms. A bride from a different dialect
591 group coming to her husband's home must anticipate a good deal of such

teasing, but it is usually good-natured, and in time she may adopt the new way of speech. 582 591

There is no elaborate wedding ceremony among the Papago. The old practice of the groom spending four nights with his bride in her home before taking her to their permanent dwelling has fallen out of use. Nowadays, under increasing white pressure, some couples in the eastern districts are married in a Roman Catholic or Presbyterian church, but in the western part of the Reservation such ceremonies are rare. Most marriages in the West and some in the East involve no ceremony and require only public recognition of an understanding between the individuals concerned and their families. The recently approved tribal code of laws (see chap. vii) requires a marriage license, a ceremony performed by a religious or other duly constituted official, and a certificate of marriage. 585

There are many sex relations outside marriage, which may evoke gossip or criticism but do not cause the social ostracism of either party. Children of casual relationships are to be seen in many homes. If the mother is unmarried, she cares for such children in her own household; when she marries, she may take them with her to the new home or leave them behind to be cared for by her parents. No stigma is attached to these children, and criticism of their parents comes from the clergy and the more ardent church members. 836 848

Residence of newly married couples is usually patrilocal. They may live in the same house with the groom's parents—in which case they often have a room of their own—or they may build a new home close by. If the groom's family is large and no more workers are needed to make a living for the group, the couple may break away, fence in a new field, and establish their own household. Although the new dwelling is usually close to the houses of the groom's father and brothers and everyone works together when necessary, the son's household is distinct from his father's and is more nearly like that of the average white family. Nowadays the trend is toward greater independence of young families. They frequently go for long or short periods to places where there is employment, but the husband's father's house is always home. 591

This is the prevailing pattern, but in the characteristically flexible Papago society the new couple may live with the wife's parents for some practical reason. Possibly there are more adults in the groom's household than in the bride's, and the help of the new couple is more valuable in her home. Perhaps the girl has no brothers to help with the crops or the cattle, or her brothers have left the Reservation. Whatever the reason for a man's joining his wife's family he assumes the responsibilities and status of a son, and the functioning of the household is not upset.

581 Normally Papago marriages run smoothly and are quite stable. Whether the new home is with the groom's or the bride's parents, the other partner does not suffer an abrupt transition from his old home situation. As before, he is expected to work industriously to help earn the family living, to defer to his elders, and to be modest and inconspicuous.

At first the new couple may be the juniors of all other adults in the family
593 group, and they have a corresponding lack of influence. During the first
585 months of marriage the bride must prove her ability to fit into the family and do her full share of work. There may be some reserve toward her as a person who is not yet fully one of the group, but, with the birth of the first child, her status changes considerably. The chances of her going home to her parents are greatly diminished. The interests of the new mother and the household have now converged in the child, and she is bound to the others by a very tangible and important tie. She goes about her work with a new assurance and no longer stays in the background when there are visitors; instead she will be called on to display the youngest member of the family. There is a new warmth in the voices of family members when they speak of her, and she is more often mentioned and considered rather than simply included because she is present.

The young father's status is also changed, for he is no longer an irresponsible youth but a man with a family. His opinions in household matters are more seriously considered, and he can speak with assurance in discussions among the men. Paternity is not a prerequisite for recognized adulthood among Papago males, but the birth of a child undoubtedly contributes to the dignity of a man's position.

593 Gradually, as they grow older and have more children, the couple will assume more responsibility for family judgments. Ideally they will at last reach the position of being the seniors in the household, with the highest authority.

587 If a man's wife dies, he is likely to remarry. The children may remain with him or may be cared for by his, or his first wife's, parents. If a woman loses her husband, she may continue to live with his family, particularly if she has children, but ordinarily she returns to her parents' home.

586 Naturally, not every marriage is successful, and divorce, usually for incompatibility, is not uncommon. One or both parents may remarry, the children of the first marriage remaining with their mother or being cared for by grandparents, whichever arrangement suits the new couple. In the case of Indian-custom marriages, divorces must be obtained in the tribal court (see chap. vii).

4: Joseph et al D,Æ-5 (1942-1943) 1949
NU28 Papago NU28

Presbyterians preach against divorce but place no absolute ban upon it, as does the Roman Catholic church. For a Catholic, remarriage following divorce involves the risk of denial of communion or even excommunication. This is a serious deterrent to good Catholics, who are fairly numerous in the eastern districts. 586

CHILDREN IN THE PAPAGO FAMILY

Marriage without children is almost incomprehensible to the Papago. They invariably say, "Every girl wants to get married and have children." Contraceptive measures are so rare as to be almost unheard of, and the occasional woman who says she does not want children is severely criticized. Yet there are no strong sanctions against abortion. The Papago strongly disapprove, but they are not shocked into action, and there are no penalties except criticism; they feel that no one else can rightfully interfere with what is really the concern of a woman and her family. On the other hand, if a man and wife have no children for some time, there is speculation by others, and the couple may visit a medicine man to determine the cause. 842 847

If Papago are asked why they welcome children, they are likely to say, "They help us with the work. They take care of us when we are old." Neither of these reasons should be underestimated. Many hands make somewhat lighter the arduous work of wringing a living from the desert, and an assured source of help in old age is especially important in a society where savings accounts and insurance are virtually nonexistent, if not impossible, because cash incomes are too low. Then, too, children are welcomed by their parents because they bring improved social status. 842 [554]

Undoubtedly bound up with all these factors, but potent in itself, is the sheer affection that the Papago have for their children. Open display of love is exceedingly rare between adults, but they fondle and make much of a child. Parents do not like to be separated from their children, and the usually reserved Papago man will allow himself to express such joy and affection at being reunited with his children as he would never show for his wife in public. Not only parents but all relatives pet little children. When small, children are treated as very dear and irresponsible beings; they are seldom struck or otherwise punished. But "when they know better," they are treated as individuals with growing responsibilities. They must learn to act in accordance with Papago ideals, to be obedient at all times, not to "talk back" to their elders, and to be unobtrusive when the elders are busy. But at no time are they set apart in a separate world; the activities of adults are open to them when they are ready and able to participate. 855

THE DESERT PEOPLE

PERSONAL RELATIONS IN THE HOUSEHOLD

611 593 Papago society is patriarchal; there is always a recognized "head of the house," and his identity is never in doubt. In a typical household of three generations, the grandfather holds authority over the group, and each married son is the head of his own family. If the grandfather grows too old for active responsibility, his authority passes gradually into the hands of the son who is generally acknowledged to be the ablest—not necessarily the eldest. If the old man dies, his wife becomes titular head of the house, but she may depend upon her sons for decisions. The Papago do not practice primogeniture, and the seniority pattern is not rigid. Although the head of the house always has the final word, he has a strong obligation to solicit and consider carefully the opinions of all the other family members before final decisions are made. Even little children may be consulted in things which concern them directly, and a child's decision as to whether he wishes to go to school or to the hospital is seldom questioned. Thus there is much give-and-take in household relationships, and final decisions on family matters usually represent the opinion of the group.

561 Certain deferences are almost unfailingly observed. Foremost among these is respect for elders. Seniority automatically conveys authority; the child obeys his parents, but he must also defer to his older brothers and sisters. Nor is this merely a pattern for young children. Each person in the family seems to have some authority over all those younger than himself; unmarried daughters living in the household, even if they are over thirty, pay decided deference to their parents and older brothers and sisters and discuss any important matter with them. The young men do the same, but they have more freedom of decision than their sisters.

562 [611] Men as a rule have greater prestige and authority than women. Descent is reckoned through the male line, and inheritance is from the father. Older brothers have more authority than older sisters, and all boys expect their sisters to wait upon them in the home. It is felt that a woman should not travel outside her village unless she is escorted by a man of her family,[6] presumably to protect her from the advances of other men. Men usually receive and spend the family's cash income. Even if a woman has a strong personality and actually makes decisions, the man is always the family spokesman, and the woman will disclaim authority, at least in public. A telling rebuke to a wife is "Do you think you are the head of the house?" Women are free to become "medicine men," but few do; neither do they hold village offices nor partici-

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[6] This custom is gradually being modified in the East.

562 pate in the village council. The rare occasions when a woman does contest an issue with men are the subject of comment by both sexes: "And she was telling them what should be done, and she a woman, telling men! How could she know about it? It is the men who know those things."

562 642 Yet women are not relegated to an inferior position; they are never ordered about and are never servile toward men. The attitude of both sexes is simply that their duties and spheres of authority and influence are different. It is possible that this pattern is changing and that women will come to have more status in spheres now dominated by men. Increasingly women are working outside the home and so are becoming financially more independent of men. The tribal constitution does not disqualify women as voters, but no woman voted in the election by which it was approved. There are no positive prohibitions upon women's participation in political matters, but they have shown no interest in politics, although Papago society is sufficiently elastic to allow it. So far, however, the old customs hold, and the spheres of men and women have not converged to the same extent as in white society in the United States.

841 One other practice with regard to women should be mentioned. In the old days menstruating women were greatly feared. Their touch was thought to weaken a man and blight any project in which he was engaged. Women were obliged to segregate themselves each month in a hut built for the purpose, on pain of bringing supernatural punishment upon their families or on the whole village.[7] Segregation is not the rule in most parts of the Reservation today, but in some of the more conservative families it is still practiced.

626 867 In both the household and the village, approval of the group is the primary inducement to conformity with the patterns indicated above. Moral discussions and tales told by the older family members make clear to everyone that he is expected to fulfil his economic obligations to the family and to comply with the customs of the household. The person who fails to conform to these standards is made aware of the disapproval of others by criticism, ridicule, or denial of privileges. A big child who tries to sit on an aunt's lap is gently laughed or teased out of the notion. Involuntary exposure of the genitals brings ridicule by brothers and sisters until the child develops an acute sense of modesty. Quarrelsome children lose treasured privileges. Both young and old are sternly lectured by the eldest members of the household if they do not abide by its patterns. The same sanctions are applied by persons outside the family group. 626 "People will talk" is an ever present and powerful inducement to live up to

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[7] A tale is told of a woman in a segregation hut who saw the approach of Apache raiders but who was so strongly imbued with the taboo that she would not leave her hut to warn the village.

626 economic and social obligations. Only when these sanctions fail to bring the nonconformists into line is there recourse to the village chief or tribal court.

Despite this rather strict control by the pressure of family and public opinion, there is considerable freedom of decision in personal matters. The balance between individual rights and family authority seems to be carefully preserved. There is no subservience but rather an attitude of respect and conformity because "that is the right thing to do," and not because the individual is forced into line.

This attitude is carried over to all duly constituted authority. The Papago are very much individuals, yet they respect law and custom and abide by the decisions of those who, in their opinion, are authorized to make them. Where parental or political authority has broken down among the Papago, it is often because an attempt has been made to force upon them new patterns which do not fit in with the old.

RELATIVES

602 596 Generally speaking, the Papago consider as relatives to be addressed by a kinship term all persons within the third degree of relationship. Beyond this degree, a relationship is often acknowledged, but it has little social significance. Those who are within the third degree may be called the extended family, and, in Papago life, it is they who are important.

596 Paradoxically, the extended family is a loosely organized but strongly knit social unit. It is loosely organized in that members move in and out of its primary locale and sometimes settle permanently some distance away. They also move in and out of the sphere of economic co-operation. Moreover, unlike the family household, the extended family does not ordinarily have a head or clearly defined gradations of authority. Probably in the past it was more definitely organized as an extended patriarchal group. Despite the present lack of organization, the extended family is a readily definable group based on very strong ties. Blood relationship between two individuals within the conventionally recognized third degree is of fundamental importance, and economic, ritual, and social aspects of life are all affected by it.

The general pattern of relationships in the extended family is much like that of the immediate household. Indeed, a cousin who lives near by is likely to be more important than a brother who has resided for some time in a distant place. Members of the extended family do much co-operative work. If a man needs help in plowing, building a house, or cutting posts, he usually asks one or more of his relatives to help him, for "relatives can be depended on," and "it is much easier to reach an understanding with them." Sometimes three

596 or four related men will do their plowing, weed-cutting, or harvesting together. A large cattle-owner will pay his relatives in cash, but the usual return is in labor.

602 431 Associated with the necessity for co-operation is the custom of exchanging gifts among relatives. In the old days gifts—usually of food—were exchanged frequently and regularly between related households. No return was asked, but the recipient was always expected to make a similar gift in the future. It is probable that this device was developed to insure the survival of the group by more equitably distributing the supply of food and other necessities, although it was never mere barter. Together with the custom of assisting relatives, the gift exchange was a form of investment, as Underhill points out.[8] The custom acquired overtones of social significance, and the gift became a symbol of esteem and solidarity among kinfolk. Today if a family has a surplus of anything—as when a steer is butchered or many rabbits are killed—portions are sent to members of the extended family,[9] and sooner or later a return gift is received. No thanks are voiced, except indirectly to other people through praise of the giver's generosity. Although the gift exchange seems to have lost most of its economic character and to have survived only as a social custom, it is still important. If individuals or families who can do so do not give or return gifts, they are looked at askance.

596 All members of the extended family have a strong feeling of responsibility toward one another. If an old couple live alone, a child is often sent to live with and help them. If they are in need and their own children are unable or unwilling to take care of them, the relatives feel it is their duty to help. So strong is this feeling that, when the distribution of relief supplies was begun during the depression, the Papago requested that some form of work be required in return, lest the system of family responsibility break down and the solidarity and independence of the people be destroyed. Throughout the lean years, the number of families continually on relief rolls remained very small.

596 578 691 Family relationship also carries an obligation to settle disputes amicably. Regarding one suit brought over the division of a field among relatives, the villagers remarked, "And they are closely related! They should be able to settle it among themselves without having to take it to court and say all those mean things." Papago believe that recourse to legal authority should be taken only by those who are not related. The old system is breaking down, and disputes which would have been settled by relatives in the old days are now being brought to court. In the eastern districts of the Reservation the effective sanc-

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[8] *Op. cit.*, pp. 42, 100.

[9] Gift exchange is now being extended to include close friends who are not relatives.

596 578 691 tions are now changing from social to legal, but in the more conservative western sections few, if any, family disputes are taken to court.

574 Not all activities among relatives are dictated by such sober considerations as economic necessity and family pride. The Papago are fond of visiting, and relatives are always welcome. The visitor is given a small gift of food to symbolize the host's happiness at his visit and the affection he bears him. In the old days it was inconceivable for one to visit an unrelated household. Today the men are freer to visit whomever they please, but if a women ventures to visit an unrelated friend, someone is likely to remark, "Why should she go down there? Hasn't she anything to do at home [*i.e.*, in her own family]?" Now that children are forming close friendships outside the family, at school and later on jobs, this insularity is beginning to break down. Still—though some relatives are more compatible than others—hospitality is offered principally to the extended family.

608 Among the Catholic Papago the family group has been widened to include persons not necessarily related by blood—godparents. According to both Sonora and Roman Catholic teaching, a child must be sponsored in baptism by a godfather and a godmother. This requirement the Papago integrated with characteristic ease into their own social structure, and godparents are now part of the extended family. They pray at the child's bedside if he is critically ill, and, if he dies, they may prepare the body for burial. Not only are they responsible for seeing that the child has proper religious training; they also serve as secondary parents. If the child should be orphaned and no relatives can care for him, the godparents will take charge of him.

A warm and close relationship is established not only between the child and his godparents but also between the two families. Parents and godparents call each other *compahli* and *comahli*, from the Spanish *compadre* ("co-father") and *comadre* ("co-mother"). One pair of godparents serves for all the children of a family. If the godparents are man and wife, they will ask the parents of their godchildren to serve as sponsors for their own children. Children of both pairs call each other by the kin terms for older and younger siblings. The rights and obligations of relatives are extended to godparents and their children, but these extensions are not so vital a part of the family system as among the Arizona Yaqui, who have a similar arrangement.[10]

596 Today there is no wider kin group among the Papago than the extended

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[10] See Edward H. Spicer, *Pascua: A Yaqui Village in Arizona*, pp. 91–116. The extended family was almost nonexistent among the Yaqui in Arizona as a result of war, deportation, and emigration, and thus the ceremonial sponsors took the place of the extended family. With the Papago, among whom the extended family is strong, the ceremonial sponsorship is only an added security, and therefore is not the elaboration of the family system that it is among the Yaqui.

THE PAPAGO FAMILY

Today there is no wider kin group among the Papago than the extended
family. One type of kinship terminology which is dying out on the Reserva- 596
tion has been correlated by Underhill with a former sib structure.[11] The 614
several different terms for "father" in this terminology seem to have indicated patrilineal lines. The significance of these terms today is difficult to determine, for they are being replaced rapidly by the generalized term for "father" (*auk*) or, in many families, by "daddy." It is safe to say that no well-developed clan concept survives and that the present concept of the family and the extended family has not changed radically within the past generation.

The old people say that, when I'itoi created men, he called the first one a 616
Coyote, the next a Buzzard, the third a Coyote, and so on until all mankind (i.e., all the Papago) was divided into two groups. The younger people today hardly know to which group they belong, and some say that they belong to both; even for the elders the terms seem to have little significance except on ceremonial occasions, when they form the basis of standardized joking.

The Papago have no other formalized humor as do many Indian tribes, but 522
jokes and teasing are the salt of daily life. Low and spontaneous laughter rises 517
whenever the Desert People are gathered together, or the occasion is indeed a serious one.

MAKING A LIVING TOGETHER

In Papago society the household is the fundamental economic unit, and 592
each member does his share of the work necessary to make a living in this 462
difficult environment. Men are responsible for tilling the fields and caring for the livestock; women manage the domestic essentials; children help with the household or farm chores according to their strength and ability. The division of labor is thus fairly definite, but all work together when necessary. Women and children help bring in the crops and gather wild plants and fruits. Boys of ten or eleven often plow.

Both men and women make articles for sale or barter. Most women know 462
how to weave baskets; a few make pottery or occasionally sew for others. The 439
men tan leather and braid ropes of rawhide or horsehair. Money earned by 596
handicrafts is thought of as belonging to the artisan rather than to the group, but in a society where incomes are low a considerable proportion of such earnings must be used for family needs.

Since the introduction of wage work, some members of the family, particu- 596
larly the young adults, are beginning to feel less obligation to contribute to 464
the household. Most of them, however, continue to help, either bringing home provisions or sending money. Wage-earners who do not assist the family are

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[11] *Op. cit.*, pp. 32–33.

596 464 seldom asked to do so, but neglect of this obligation soon becomes known, and the offender is severely censured by persons outside the household.

423 428 596 Just as each family member does his share toward maintaining the group, so each has an interest in the means of subsistence. As previously noted, all land belongs to the tribe, and families are allowed to use as much as they need on assignment by the village or district council. Fields ordinarily continue to be used by the same family after the death of its head. All the sons inherit equally, sometimes without division. Thus, ideally, all family members, even though they are not living with the group, are entitled to use these fields as needed, but nowadays there are occasional difficulties when absent members wish to return to the land.

422 428 Cattle and horses are individually owned, although those belonging to various members of the family are usually herded together. Each family has its own brand, some small difference in the mark designating individual ownership. The head of the house may give certain animals to each of his children as they grow up, but on his death the main herd usually goes to the new head of the house unless other arrangements had been made. The tribal code of laws has provisions for wills after the white fashion, and a dispute over inheritance can be brought before the tribal court if no amicable settlement can be made otherwise.

231 868 [181] The strong attachment of the Papago to their fields doubtless dates from tribal prehistory, but cattle and horses have also become highly important since their acquisition from whites. The active life of many a Papago man centers in his horses and cattle, and they are the first interest of all little boys. In early childhood a boy begins to swing a rope and lasso stumps, piles of bedding, chickens, and dogs. He runs at a gallop, patting himself as he would a horse, or seizes a stick and canters off. Later he learns to ride, drive the horses to water, and take the reins of the family wagon. He breathes in the excitement of roping and throwing and learns to distinguish brands. Very early he knows which animals in the family herd belong to him, and he sells a steer in his turn when the family needs money. Finally, he is allowed to take part in roundups, to sleep out with the men, to listen to stories around the campfire under the clear stars. He is particularly proud of his horses; he knows that people will regard him with respect because he owns them.

231 Horses, rather than cattle, are the prestige animals. They are often of little economic value, at least in the numbers now owned by the Papago, for many more are kept than can be used in farm and range work, and a recent epidemic of dourine has prevented the sale of horses for any use but slaughter. A Papago does not ordinarily know exactly how many head of cattle he has, but he

knows and is proud of every horse. Cattle are merely his bank or a source of 231
food; they are a means to an end and not, like horses, an end in themselves.

Together, cattle and horses furnish food, money, transportation, prestige, [181]
and the excitement of rodeo and roundup. To many a Papago a good field, enough cattle to provide occasional meat and money, a few horses for prestige, and plenty of rain would make the ideal combination.

Chapter V

VILLAGES AND DIALECT GROUPS

621 VILLAGE and dialect group have a deeper and more personal meaning to a Papago than membership in the tribe. The village is his home, the place where he grows up and where his relatives are. In the old days, when the people migrated at least twice a year between the fields in the valleys and the wells in the hills, and new fields were frequently sought, the village was not so much a place as a particular group of people; but, now that communities are more stabilized, the *place* has also become important. Children in schools only a few miles away grow desperately homesick, and adults look forward to seeing the sun rise or set in the familiar notches of the mountains. People do move to other villages or leave the Reservation entirely, but they always want to come home.

THE VILLAGE

621 361 If you drive along the highway to where you are told there is a Papago village, you are likely to see only three or four houses, though you may know that two hundred and fifty people live in this community. But when you leave the main road and investigate the wagon trails, house after house appears, and you discover that a village of fifty households may cover as much as two square miles. Though some houses cluster around the school or the church, there seems to be no nucleus for the village as a whole. There are no streets or other spatial regularities, nor is there a general pattern for the location of homes and fields; some families live in the midst of their fields, and others live at some distance from them. Closely related families may live fairly near to each other, but most households see the tops of their neighbor's houses over a hundred yards of creosote and cholla bushes. Thus Papago have privacy without fences; they like this separateness and think nothing of the distances to be walked.

461 Like the houses, the events of village life are few and far between. Quiet day follows quiet day. The people work continuously but calmly, their labors

punctuated by an occasional fiesta,[1] a roundup, a death, or some other impor- 461
tant occurence. Life is slow and measured, without the rush of events and the crowded calendar of people who live close together as do the Pueblo Indians.

WORKING TOGETHER

Although Reservation lands belong to the tribe as a whole, the land in and 621
around each village is thought of as belonging to that community and is 423
apportioned by the village or district council. If a man wishes to put in a new field, he must seek the consent of the village. Conversely, if a field has not been used for five years, the village can request the "owner" to take down his fences, or the request may come to the council from another man who wishes to use the field. The field or home site which remains in use is "owned" by the user, but, if he wishes to change either, he must obtain permission. Grazing areas also are thought of as belonging to the people of the village or the district, but an individual who has developed water resources virtually has first rights to the surrounding range and can shut off other people's cattle from the water. This general picture is complicated by the fact that certain areas were scheduled for allotment to individuals thirty years ago. Though the allotments were never approved, people know what land had been scheduled for them, and others hesitate to ask for its use.

Every village is organized for co-operative undertakings. For the care of 621
their livestock, the men elect a foreman who has proved that he knows horses 476
and cattle. This man, probably chosen from a prominent family in the village, 231
serves, as long as he performs his tasks to the general satisfaction of the community, without remuneration. During the big cattle roundup in October and the horse roundup in early summer (which may include a small-scale cattle roundup), the foreman "works for the people"; i.e., he has charge of all the proceedings—the day and place to start, the methods to be used, and all the activities to be carried on by the village men and boys. He is responsible for seeing that the proper brands are applied to calves and colts, a process that is carefully scrutinized by the cowboys. The foreman also decides what other co-operative work should be done to protect and improve the villagers' livestock; and when he thinks a corral should be built or a *charco* improved, he summons the men to come and help.

Another type of co-operative work is keeping the washes clear of brush and 621
sandbanks, so that they will not turn out of their courses or deepen their 476
channels, leaving established fields useless. All the men whose fields are 241

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[1] The fiesta, the chief religious and social event of village life, is described in the following chapter.

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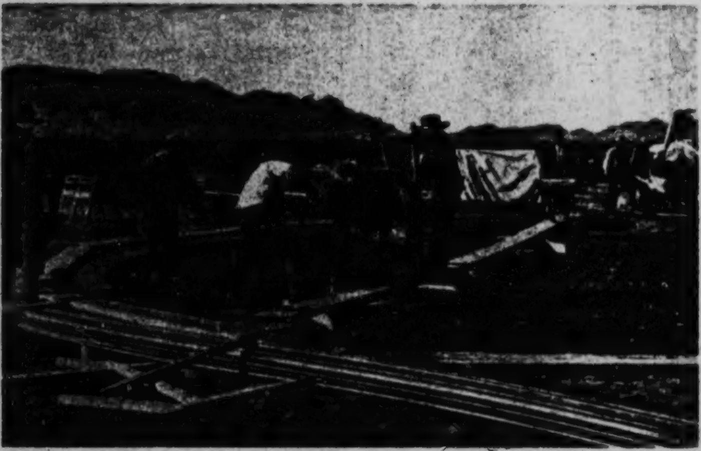
watered by a wash are responsible for keeping it cleared; each must see to that portion which runs through his field.

Keeping fences in repair is also often a co-operative job. When a single fence divides the fields of two men, they share the work and expense of keeping it up; however, a fence or part of one which runs along only one man's property is his responsibility.

PLATE VIII

312



United States Indian Service

Working Together

The white man's way: paid labor. Pouring concrete
for a community stock tank, a CCC project

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In Topawa there are two other community enterprises: the blacksmith shop and the village well. The shop, a corrugated metal building situated in the center of the village and well stocked with tools, was built with government funds at the request of the village, but it is the people's responsibility. Two men keep the keys, and any villager who wishes to use the shop is free to do so. The well, at which all the stock are watered when the *charco* goes dry, was also built by the government and is operated by the village. One man is responsible for running the motor and keeping up the supply of water, but each household contributes money to buy gasoline.

4: Joseph et al D.E-5 (1942-1943) 1949 NU28 Papago NU28

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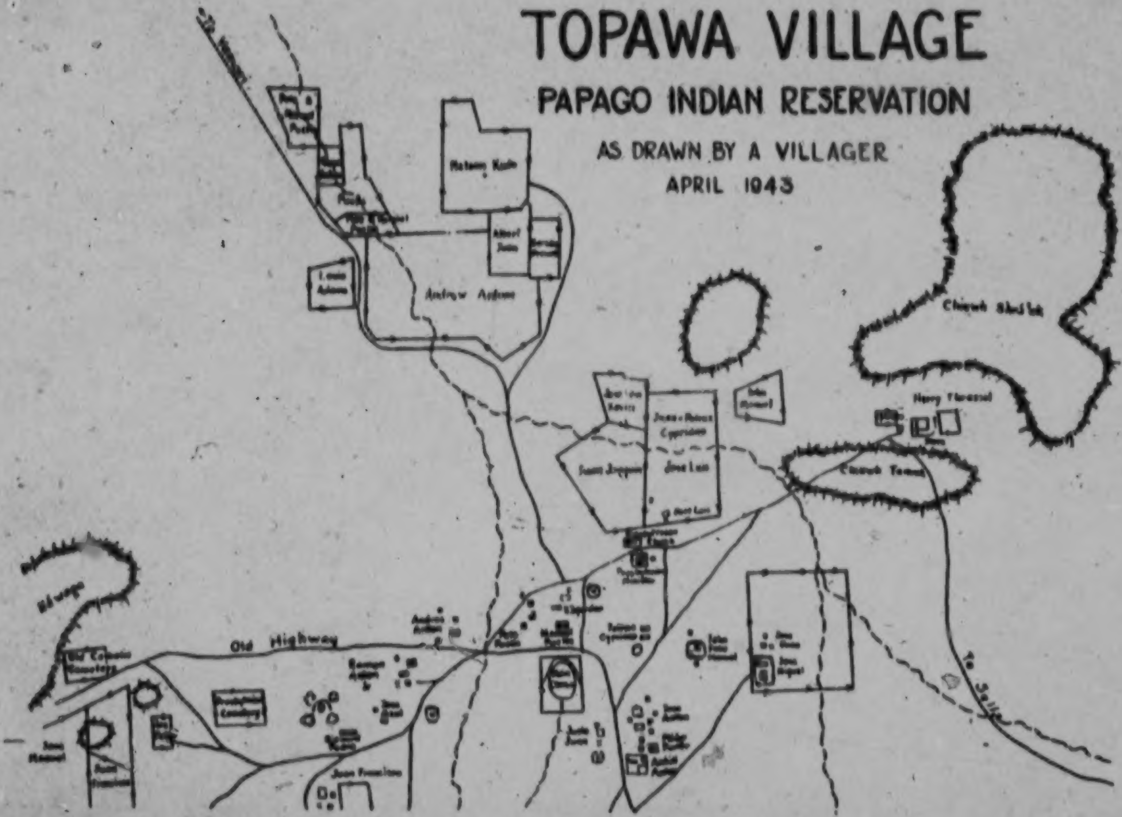
[p. 62 (A)]



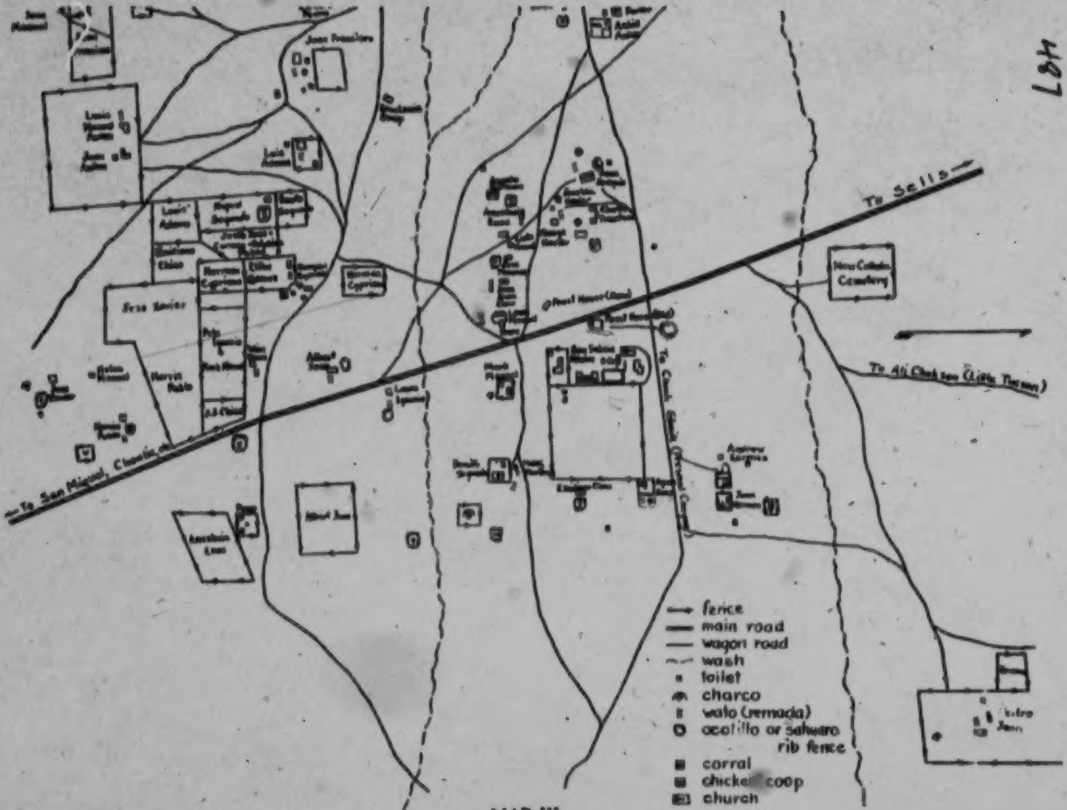
TOPAWA VILLAGE

PAPAGO INDIAN RESERVATION

AS DRAWN BY A VILLAGER
APRIL 1943

Andrew Adams
Louis Adams
Jose Luis
Old Highway
Old Catholic Cemetery
Juan Francisco
To Sells

[p. 62(B)]


Juan Francisco
Jose Xavier
Harvin Pablo
Albert Juan
To San Miguel, Chuwin...
To Sells
New Catholic Cemetery
To Ali Chuk son (Little Tucson)
Feast House (New)
Feast House (Old)
Pedro Juan
fence
main road
wagon road
wash
toilet
charco
wato (ramada)
ocotillo or saguaro rib fence
corral
chicken coop
church

MAP III

4: Joseph et al D.E-5 (1942-1943) 1949
NU28 Papago NU28

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487

VILLAGES AND DIALECT GROUPS

LEADERSHIP AND AUTHORITY IN THE VILLAGE

622 Authority in the village is vested in the chief or *kobanal* (from the Spanish *gobernador*) and his two assistants. According to custom—since there is no written law for village affairs—these offices are elective. In some villages the chief always comes from a certain family, but this is by no means universal. (In Topawa the man who was chief at the time of the field work for this study was not closely related to any of his three most recent predecessors.) The chief holds office until he wishes to retire or until the people become dissatisfied with him.

The chief seems to function as judge, mayor, and sheriff combined. He is called on to settle personal disputes over family problems, division of lands, disagreements over water, damages done by straying cattle, and all the miscellaneous problems that arise wherever people live together.

623 In his nonjudicial capacity, the chief is the head of the village council, composed of all the men of the village. In the old days they met every evening in the village "round house,"[2] but nowadays meetings are less frequent and regular. Here all the village problems are discussed: lands are assigned for farm use; stock-owners air their problems, and the doings of the Agency are talked over. Everyone has his say if it takes all night. In the old days unanimity of opinion had to precede a decision, for the concept of majority rule was not known to the Papago. Nowadays, there is not always unanimity for the simple reason that there is not time. A government proposal may have to be accepted or rejected, and white men call for prompt action.

623 561 The analogy to the patterns of authority in the household is striking. The principle of seniority prevails, and men under twenty-five ordinarily do not say much in council meeting. Some young men nowadays attempt to speak out before they have had enough experience to know much (according to Papago standards); but, even if their ideas are good ones, they gain scant consideration. It is the elders who do most of the talking. The chief is in somewhat the same position as the family head; his decisions are final, but he is obligated to consult all the others, to find out "what people think about it."

184 622 The situation described in the foregoing paragraphs prevails in most parts of the Reservation. The people of the western villages, however, say that their chiefs exist only in the imaginations of white people, and it is true that they have no elected officials or formal council meetings. Yet in every western village except Hickiwan, there is an old man who by the force of his personality has attained the leadership of his community. (In Hickiwan a relatively

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[344] [2] An old-style round building thatched with grass. In some villages the house is now a rectangular adobe building.

[text continues on p. 65—Analyst]

4: Joseph et al D, E-5 (1942-1943) 1949
NU28 Papago NU28

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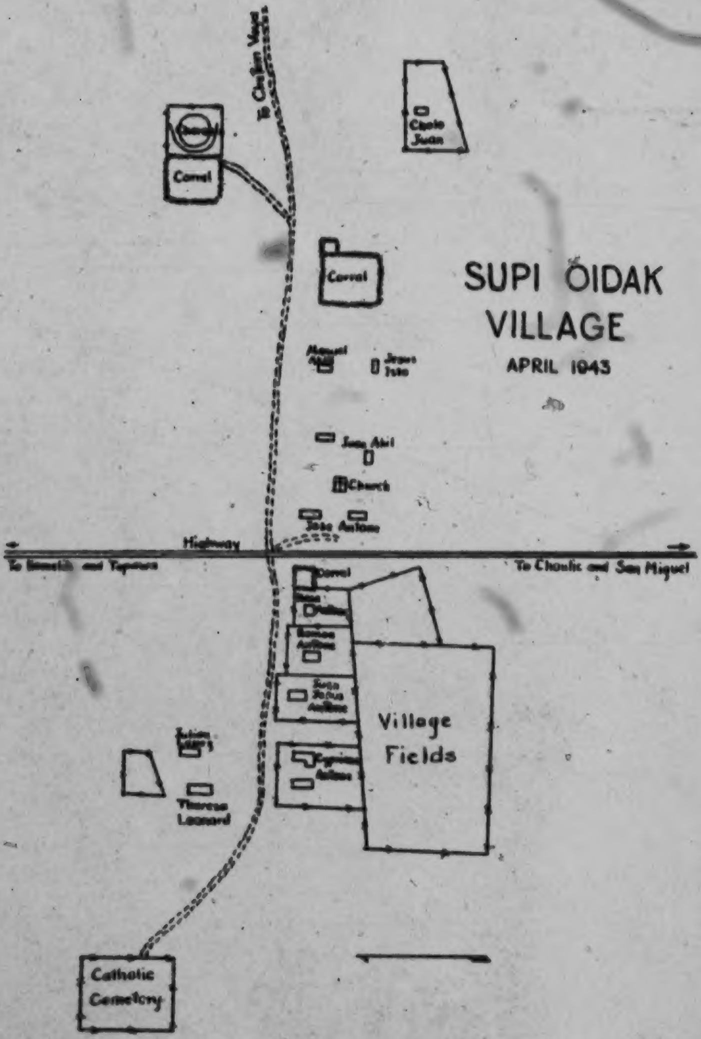
MAP IV


SUPI OIDAK
VILLAGE
APRIL 1943
Corral
Corral
Chapo Juan
Jesus Isio
Juan Abil
Church
Jose Antone
Highway
To Choulic and San Miguel
Corral
Village Fields
Thomas Leonard
Catholic Cemetery

Supi Oidak Village, April, 1943

[p.64]

young man, one of the district councilmen, is regarded as chief by the Agency 184
but not by his own people.) Though no regular council meetings are held in 622
these villages, the men meet informally to discuss problems when they arise.
It is probably significant that all the three "strong men" of Hickiwan District [756]
are medicine men, but how much of their strength is due to fear of their
supernatural power is a matter for speculation.

Papago who have disputes to be settled have considerable leeway in bringing their complaints before authority. 627 If a man wishes, he can take his case direct to the tribal court (see chap. vii) rather than to the village chief; or the district councilman, who in some cases is a man of great influence, may be called on for a decision. In one case known to the writer the defendant was not satisfied with the tribal court's decision and so brought the matter to the village chief, then through the district councilman back to the tribal court. There were apparently no negative sanctions in the village against this procedure; a man is free to take his legal problems where he pleases.

However, in all the western villages disagreements are settled locally, and [184] there is no recourse to the tribal council or court. Local quarrels may be noised about the district but not far beyond, as controversies are concealed or glossed over before outsiders. Owing to recent unhappy experiences (see chap. vii), the Reservation police thereafter refused to go to Hickiwan District. The people are well content with this situation, for they are determined to keep the management of their affairs in their own hands.

Throughout the Reservation, matters which require local co-operation and 626 leadership are handled without friction. Leaders, elected or otherwise, are respected by the people because of their position. Their decisions and those of the council are accepted when the people feel that such decisions are based on a thorough knowledge of the recognized way of doing things and are made after discussion and expression of "what all the people think." Papago know that they are free to express disagreement, but usually would rather accept a decision with which they are not entirely in accord than to stand out from the crowd and make "people talk."

INTERVILLAGE RELATIONSHIPS

Some present-day Papago villages are in the same locations as they were in 621
Kino's time, and others are offshoots of these old villages, probably dating 571
from the cessation of pressure from the Apache. Ties between the parent-village and those formed from it remain close. People visit back and forth, they co-operate in roundups, and they are sure to attend one another's fiestas, but the degree of interaction is determined by blood ties and proximity.

621 571 There is also intercourse between unrelated villages. For example, not every settlement has a store, and the most convenient place to buy supplies may not be in a related village. Nowadays there is intervillage political activity chiefly in the eastern districts.

DIALECT GROUPS

197 571 634 Next to the family and village, the most important social entity to a Papago is his dialect group. The nine districts into which the main Reservation was divided in 1935 are political units, and, though they coincide somewhat with the areas occupied by dialect groups, they are still too new and too little a part of the Papago pattern to command loyalty. One's dialect group, on the other hand, is made up of relatives, relatives of relatives, or at least of people having one's own colloquialisms, pronunciation, and traditions. Papago are always interested in talking about the groups and the real and fancied differences between them, many of which are accounted for in ancient legend. But the considerable interchange of teasing indicates deeper cleavage, as each Papago feels his own group to be "the" people.

There are probably six main dialect groups on the Reservation today, plus several mixed groups in areas where main dialect groups adjoin. Certain of these dialect groups may well be the modern descendants of the Piman divisions Father Kino called "tribes" (see chap. ii), which have migrated rather extensively since 1700. It is possible that most of the Sobaípuri and Gileños are now officially the "Pima" who live on the Gila River Reservation to the north. They speak a dialect of the Piman language which is mutually understandable with any of the Papago dialects, but "Pima" is not here considered to be one of them. (Numerous Pima have, however, intermixed with Papago on the extreme northern tip of the Reservation.)

It appears that five of the six Papago dialect groups on the Reservation today are descendants of three other "tribes" mentioned by Kino: the *ḳoḳololoti*[3] from the "Pima proper," the *hauhauwash* from the Soba, and the *totoḳöwany, hu'hu'uhla,* and *ḳiy'ḳima* from those which were called "Papago" by Kino.

Our knowledge of these origins is speculative; furthermore, we do not have specific information about the dialect groups or their distribution, for so far no study of the dialect geography has been attempted.[4] For instance, the delineation of one of the groups (*ḳiy'ḳima*) is particularly questionable, as is the name for another (*hauhauwash*). However, the following discussion of the dialect groups, and Map V, which shows their approximate distribution, are based on material given the authors by Papago, supplemented by data from Underhill[5] and the Agency.[6] 197 571 634

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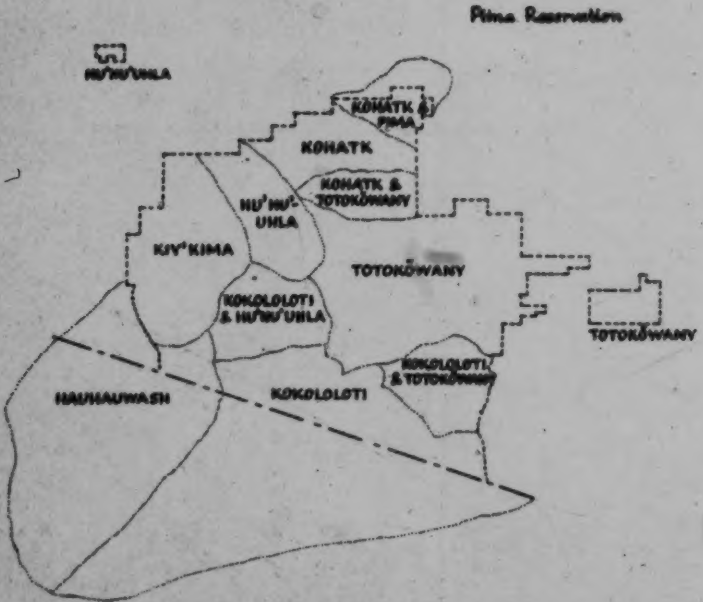
[3] *Koḳololoti* is plural, *ḳoloti* is the singular. The transcription used here follows as closely as possible the alphabet devised for Papago by Dr. William Kurath, *A Brief Introduction to Papago, a Native Language of Arizona,* pp. 13–14. However, he records no *o* for Papago; where *o* is used here in Papago words, the writer (R. S.) heard it, and future, more careful work will have to determine what should be used.

[4] *Ibid.*, p. 7.

MAP V


Pima Reservation
HU'HU'UHLA
KOHATK & PIMA
KOHATK
KOHATK & TOTOKOWANY
HU'HU'UHLA
KIV'KIMA
TOTOKOWANY
KOKOLOLOTI & HU'HU'UHLA
TOTOKOWANY
KOKOLOLOTI & TOTOKOWANY
HAUHAUWASH
KOKOLOLOTI

APPROXIMATE DISTRIBUTION OF DIALECT GROUPS ON THE PAPAGO RESERVATIONS, 1943

In the south-central and southeastern areas of the Reservation are the *kokololoti*, Kino's "Pima proper," who moved north and west from their original home in what is now Mexico. According to one informant, their name means "rattling talk," but others say that the term comes from the Spanish translation (*tecolote*) of the name of one village, Chukut Kuk ("owl hoot"), transliterated by the Papago. The *kokololoti* population is about fifteen hundred.[7] It is likely [101]

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[5] *Social Organization of the Papago Indians*, pp. 59–69.

[6] *Program, Papago Reservations, Arizona*, p. 7.

[7] *Ibid.*

197 that their present distribution is due to their dispersion into smaller settlements
571 from defense villages at the end of the Apache wars.

634 This was the area of greatest Spanish influence, and some of the people speak Spanish. They learned from the missionized Indians to the south how to raise cattle and horses. They were good horsemen long before the other groups, and to this day it is said that you cannot beat one of them in a horse race. They are also said to be impulsive. The *ḳoḳololoti* were called on to help Spanish and, later, Mexican and American soldiers in pursuing the Apache and so acquired significant numbers of guns before they were common among the northern people. This early acquisition of livestock and implements, together with more abundant rainfall in parts of the area, has doubtless been at least partly responsible for the higher economic status of this region today. *Koḳololoti* acculturation began earlier and has continued more steadily than that of other Papago (see chap. ii).

North of the *ḳoḳololoti* live the *totoḳöwany*, who occupy a large area in the central and eastern part of the main Reservation and all the San Xavier
[101] Reservation. This group, estimated at about thirty-two hundred,[8] is perhaps the largest on the Reservation. Underhill claims the name for this group is an opprobrious nickname meaning "loose gee-string," but informants have told the writer that it describes the guttural cast of their speech. These are the "Papago" described by Kino. Of them, Underhill says: "It is this group which, tradition says, came up from underground and followed Elder Brother, finally planting their prayer stick on the site of Archie [Achi] and thence populating the land. They are the people whose ceremonies show the greatest amount of Pueblo influence. The Pima, with whom they are closely associated, seem to have provided the channel....

"The Archie [*totoḳöwany*] group was the furthest from Spanish influence and acculturation has been slower there than in the south. Few of the people speak Spanish and few over forty speak any English. They did not begin to keep cattle until long after the southerners.... They retain many of the old ceremonies abandoned elsewhere."[9]

Other Papago consider the *totoḳöwany* cautious and respect them for their skill as medicine men and runners, skills which were greatly valued in the old culture. Although they pride themselves on conserving the old ways, the *totoḳöwany* are not the stiff-necked intransigeants of the Reservation.

The title might properly be bestowed upon two other groups, the *ḳiy'ḳima* and the *hu'hu'uhla*, both of which are located in the northwestern corner of the Reservation, the *ḳiy'ḳima* farther west and south than the *hu'hu'uhla*. *Hu'hu'-*

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[8] *Ibid.*

[9] *Op. cit.*, pp. 59–60.

197 571 634 *uhla* also live on the Gila Bend Reservation. These two groups have heretofore been considered as one, and even various leading eastern Papago do not agree as to whether or not they should be differentiated. However, those who live in the area concerned informed one of the authors that there are two groups, though intermarriage has carried members of one group into the other.

These two groups together number about nine hundred[10] and are probably also part of the people whom Kino called "Papago." The word *ḳiy'ḳima* means [101] "stuck-up" or "show-off" and is applied to these people because they are said to use the word frequently.[11] Their idiom is reported to be like that of the *totoḳöwany* but spoken faster. According to Underhill, "Huhuhra means grandmother's children, i.e., orphans, and was bestowed on the people of Kaka, one village of the group, because they had no well and wandered about sharing those of other village units."[12] This author, who does not differentiate the two groups, says that the dialect contains many incomprehensible words, presumably ancient. She further says: "The legend is that these people did not 'come up from the underground' but are the original inhabitants of the land, driven out by the Archie [*totoḳöwany*] people."[13]

Eastern Papago look on both groups as being backward, slow, and conservative. In keeping with this conservatism, they have been the center of resistance [185] to government policy in recent years, opposing or ignoring many Agency proposals, and such recent requirements as registration for Selective Service. Many of them go to work in the mines at Ajo, but they remain insistently of and for their own groups.

The other western dialect group, which some western Papago call *hauhauwash*, numbers about four hundred people;[14] they live in the area around Menager's Dam, which was added to the southwestern corner of the Reservation in 1938. Most of this group still live west and south of the Reservation, and some only recently migrated to the Menager's Dam region. These people [101] (probably Kino's "Soba") are known variously today as *hauhauwash*, Sand Papago, Sonoita Papago, *awatoḳam au'autam* ("Sand Dune People"), and *so'obaḳam au'autam* ("Soba Tree People").

Another small group—of about three hundred people[15]—is the *ḳohatḳ*, who occupy the area north of *hu'hu'uhla* and *totoḳöwany*, centering around the village of Kohatk. Their dialect is very similar to Pima, and the two peoples

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[10] *Program, Papago Reservations, Arizona*, p. 7.

[11] However, A. W. Jones, who has made a study of the dialect groups, says that *ḳiḳima* is a term used of any dialect group to which the speaker does not belong.

[12] *Op. cit.*, p. 65.

[13] *Ibid.*

[14] *Program, Papago Reservations, Arizona*, p. 7.

[15] *Ibid.*

197 571 634 have common cultural traits. As most of the *ḳohatḳ* group were under jurisdiction of the Pima Agency for some time before the establishment of the Papago Reservation, many have intermixed with Pima. Some people call them "Pima copycats." Traditionally the *ḳohatḳ* were the best fighters in Papaguería, and they are known today as "show-offs." Underhill has this to say of them: [101] "*Kuhatḳ,* meaning something dried and burnt, was spelled by the Spaniards *Quajote*. . . . It figures largely in the tale of conquest and it was here in the early days of settlement that the best warriors were said to live. The Bitter Man at Kuhatk was leader in battle for his own group and for Archie.

"Archie legend says that the kuhatk people moved to get better land and thus came closer to the Pima than to Archie. Certainly they were in close communication with the Pima when Kino found them. . . . Though they may have once felt themselves a part of the Archie group, they now speak somewhat differently and are regarded as a separate unit. Still, it is obvious that Pima, kuhatk and Archie form a group similar in dialect and customs and that later distinctions have been arbitrary."[16]

Intermingling of two dialect groups where their territories meet is now pretty generally recognized, and these mixed groups may even have their own names. In part of Pisin Mo District, *ḳiy'ḳima* and *ḳoḳololoti* have mingled. Some of the *ḳohatḳ* have mingled with the Pima to the north. On the other hand, Anegam, because it remained part of the Papago Reservation while other *ḳohatḳ* villages were under the Pima, was ceremonially connected for a long time with the near-by *totoḳöwany* villages of Achi and Gu Achi, but shared a well with the *hu'hu'uhla* and maintained other contacts with them. Now the people of the Anegam area are beginning to be recognized as a subdialect group. Sells, the Agency town, is a conglomeration of people from many parts of the Reservation; here another subdialect may arise.

What is happening in Baboquivari District may be indicative of the trend on the Reservation. Here two of the largest dialects, *ḳoḳololoti* and *totoḳöwany,* have mixed. The older people still know which dialect they speak, but the distinction is not so clear with the children; so a subdialect seems to be arising. A further mixture is resulting from intermarriage with noncontiguous groups. A man's father might be *totoḳöwany,* his mother *ḳoḳololoti,* and his maternal grandmother *hu'hu'uhla.* With the present-day ease of transportation, and with young Papago meeting off the Reservation in places where they work, intermarriage is likely to increase. In time, language differences may slowly disappear, or at least take on a new face. Since many Papago leaders and also the interpreters, who come from the mixed *totoḳöwany-ḳoḳololoti*

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[16] *Op. cit.,* pp. 63–64.

villages, travel widely over the Reservation, it is possible that the prestige they 197
carry will eventually make their subdialect the language for the whole 571
Reservation. 634

However, there is still a strong in-group feeling. Villages of the same dialect
are likely to line up together on social and political questions, and there is 186
much good-natured banter about the supposed superiority of each group. Also, 197
outside influences have left and are leaving impressions of varying depth and 571
extension upon the different groups. Since these influences have come from 634
different national groups (Spanish, Mexican, American) and still come from different classes among the various nationals (priests, missionaries, teachers, ranchers, miners, and government employees), it is likely that at least the difference between dialect groups which result from differing outside influences will remain for some time.

Chapter VI

DIVERSE CREEDS

771 IT IS difficult to make generalizations about Papago religion, for belief in and practice of the five kinds to be found on the Reservation today—aboriginal, Sonora Catholic, Roman Catholic, Presbyterian, and Baptist—vary greatly in different districts and in succeeding generations. It is safe to say that the native religion is still important in varying degree to all the Papago except the strictest Presbyterians. However, even some of the most ardent followers of the old religion are also Sonora or Roman Catholics, and in the western districts and in many eastern villages Sonora Catholicism—combined with old Papago beliefs—holds almost complete sway. Where the Franciscans have established schools or churches, the people are beginning to become Roman Catholics; but here, too, the old beliefs are retained. In five eastern villages the Presbyterian faith has made some headway; many members of this church deny certain of the old beliefs, though they still visit the medicine men. A Baptist missionary who began to work in Sells in 1943 drew crowds of Indians to his services, but this sect is too new on the Reservation to be adequately evaluated.

THE OLD RELIGION

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609 The Papago are polite and patient with the inquiring visitor, for they know that "white people are like that—they always want to know everything." But there is one realm of Papago life which the people will never reveal in its completeness and complexity: their old religion. The old people feel that the "Milikans" (Americans) manage their economy and dominate their politics. This they do not mind because the Milikans "help a little, though we lived a long time without them." Nor do they mind the white people visiting their Christian churches, because, after all, Christianity is a part of white culture. But they will brook no interference in the one thing the Papago have left which is their very own—their religious life. They do not wish it to become known among the white people, who would not understand it, would laugh

at it, would try to influence it. Such interference might upset the whole Papago 771
scheme of things. 609

Fear of interference is based to some extent on experience. For many years the government tried to stop the summer rain ceremonies because they involved 771 wine and intoxication. With characteristic elasticity, the Papago merely attended the ceremony in another village when pressure on their own com- 609 munity became too severe. Such efforts on the part of the government were 797 abandoned in 1933, when it was conceded that Indians, like other citizens, have a right to religious freedom. Presbyterian missionaries have tried to stop the "heathen rites" by forbidding their converts to attend, and within their own territory they have been fairly successful. The approach of the Roman Catholics has been quite different; they have worked slowly, trying first to eliminate from native belief what they felt to be contrary to their fundamental creed and then, with time and a good deal of sympathy and understanding, seeking to bring the people to more orthodox faith and practice.

Despite the fact that for a decade white interference has been very limited, much of the old religion has disappeared. In most parts of the Reservation people say that the old men who know the ancient ceremonies are dying off and that no one else has learned how to conduct them, and they bemoan the consequent disasters. This applies, however, chiefly to the ceremonials in which many participated. The rites of the medicine man and singers, which do not require a group, apparently flourish everywhere on the Reservation, though Papago fear that these may die off, too.

Papago ceremonial life seems to be mainly concerned with two things: rain and health. Though many of the old practices have disappeared, the emphasis on these two all-important areas continues.

BRINGING RAIN

Many Papago songs—secular as well as religious—mention the importance 789 of rain, and everyone takes care to do the proper things to bring rain. (For example, when the cactus fruit is picked, its shell must be left on the ground with the inside exposed.) Though the medicine men's principal function is to diagnose the cause of illness, they also look for the cause when rain does not come. During the severe drought of 1943, medicine men from all parts of the Reservation met to inquire into the causes; one of the reasons appeared to them to be the killing of horses in the dourine epidemic.

Most of the old Papago ceremonials are in one way or another connected with bringing rain, even though the primary purpose may be different. The annual treks to the Gulf of California in the old days were made to get salt, 789 but they were also occasions when the rain spirits living over the Gulf were besought to follow the Desert People back to their homes. The Papago believe that official prohibition of these trips through Mexico has brought about a general decrease in rainfall. The circle dances still held on the Reservation are connected with rain-bringing; the Christian groups also have ceremonies to pray for rain, which will be discussed in the following section.

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778 Another means of bringing the rain is the manipulation of the village fetishes. The fetishes consist of a sacred object; usually a stone, which is kept hidden in the mountains, and a medicine basket, which is kept in the home of the "Keeper of the Smoke." In the old days this official was the head man of the village, who presided at the council meetings in the village "round house" and also directed ceremonial life. After the Spaniards introduced the office of village chief, with authority over secular matters, the Keeper of the Smoke became a purely religious functionary. His duties now are to direct the wine ceremony and to care for the village fetishes, which must be carefully guarded, since they assure the well-being of the village and give supernatural sanctions to its existence. If any unauthorized person, such as a bad medicine man, should handle them, drought and disaster might ensue. Once a year, just before the wine ceremony, the Keeper of the Smoke brings the medicine basket before the men of the village and opens it. The handling of its contents and the wine ceremony together bring the rain.

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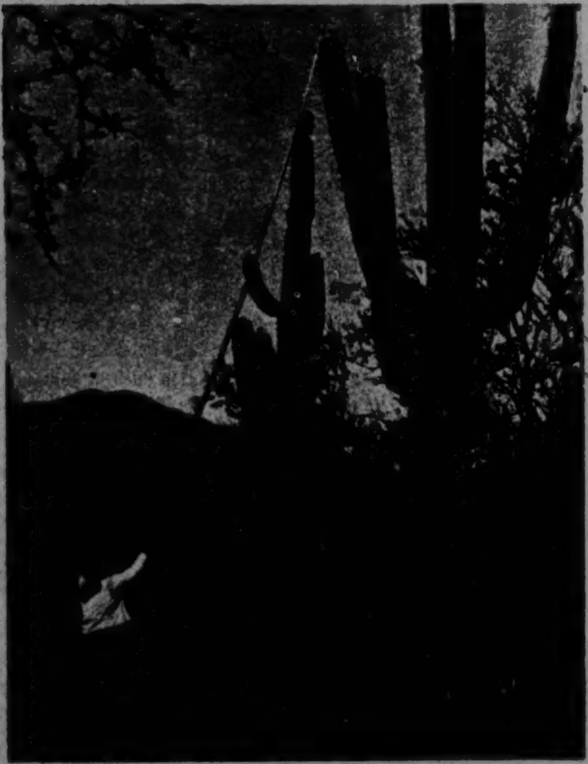
273 Both the handling of the fetishes and many activities of daily life are directed to rain-bringing, but the principal means is the wine ceremony, which occurs after the fruit of the saguaro cactus has been picked in June. From the pulp of the fruit, syrup is made and carried back to the villages to be fermented for use in the ceremony, held sometime during the summer.

When the time has been set, each family donates syrup for ceremonial use, probably about four quarts. This syrup, together with some for family use, is sent to the round house for fermentation in large ollas. During the fermentation period of four nights, the syrup is carefully watched and tested by men who have learned the proper procedure, and all the villagers gather each night to participate in the songs and dancing which aid the process. They sing of clouds, wind, rain, and the growing of crops and perform a simple circle dance around a small fire in the dark night. Everything is done four times. While they sing and dance the medicine men rise and stand quietly, waving their sacred eagle feathers. If the feathers gather moisture or drip, the rain will come soon; if they stay dry, the rain is many days away.

After the medicine men announce that the wine has reached the proper stage of fermentation, they and the singers make set speeches. Then the wine

[Text continues on p. 76- Analyst]

PLATE IX



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417
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Jane Chesky

a) Picking the fruit from the giant saguaro

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Jane Chesky

b) The fruit goes into an olla for cooking

AT THE CACTUS CAMP

[p. 75]

789 273 is ceremonially served to each adult in a prescribed order. When it is all consumed, families who have their own ollas invite their friends to join them and all reach a stage of mild intoxication. Many fall asleep. Sooner or later the rain comes—many individuals tell of having been caught in a heavy rain on the way home from a ceremony.

[184] The wine ceremonies are still general over the Reservation, with the exception of the two conservative western districts, where the custom lapsed twenty years ago. This apparent paradox may result from the fact that most of the present western villages were settled within the last two decades from mountain villages which no longer exist. Perhaps the old ceremonies disappeared with these villages.[1] Or perhaps they were discontinued during the quarrels over cattle and white administrative policy that divided the westerners for years. However, in the area around Gu Achi many old ceremonies are said to flourish.

The persistence of the wine ceremony in most parts of the Reservation shows its importance to the majority of the Papago today. Only the Presbyterians refuse to attend. Probably their overt expression would be that "those people over there" believe in such things but good Presbyterians do not; but what many of them really feel may be something different. Their profession of disapproval is a source of sorrow to the believers, but it does not, they feel, lessen the efficacy of the ceremony.

It should be noted that drunkenness is not the objective of the wine ceremony. It is a means to an end—to bring the longed-for rain that will make the fields green and bring food to the Desert People. The Papago feel that the wine brings happiness and song; it is a symbol of the renewal of life with the coming of rain and it is a purification of the mind and heart. The ceremony has a social function of erasing the evil and ill feeling of the past year. The speeches that precede the serving of the wine deal with proper behavior, stressing the old Papago virtues, peacefulness and harmony. It is these things which the ceremonial drunkenness is meant to bring.

733 Of late years other forms of drinking have increased tremendously over the Reservation. At the fiestas there is a good deal of drunkenness which sometimes leads to violence, and there is much drinking which is unconnected with any ceremony. The Papago themselves see the problem and are greatly concerned about it. Women and particularly children are afraid of drunkards and are deeply distressed when the men begin heavy and continuous drinking (see chap. xiv). The women do not mind the drinking itself; what troubles them is that it is done in the wrong spirit. Drinking should bring happiness

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[1] At one of the western Hickiwan villages a round house was built about 1941 and wine is made each year, but there is no accompanying ceremony.

and singing, as it does in the wine ceremony, not cruelty and fighting. Women 733
say that they sometimes talk to their husbands but that "they don't pay any
attention." Others simply leave home until their husbands sober up. Religious
sanctions lessen drunkenness among the Presbyterians, but the group is small.

The Papago lay part of the blame on the federal law which forbids the sale 733
of liquor to Indians; they say that forbidding the possession of something is a 177
challenge. Whether or not this contention is justified, the real difficulty with drunkenness has coincided with the period of accelerated acculturation and particularly with the transfer from a barter to a cash economy. Illicit liquor is easily acquired when one has money, and with the prevalence of wage work almost every Papago man has cash. Possibly the speed of acculturation has brought with it conflicts and maladjustment for which compensation is sought in drinking. The disappearance of the old village games and races, which used up much surplus energy and sometimes required arduous training, may also have brought about recourse to other forms of stimulation and excitement. The problem remains difficult and pressing, for no adequate solution has been found.

CURING SICKNESS AND COUNTERACTING MISFORTUNE

In an environment which requires constant and hard labor, sickness might 753
well be one of the most dreaded misfortunes. This attitude has probably been
reinforced by the grave health problems of the Papapo (see chap. vii).

The Desert People believe that sickness and other misfortunes come from offending one of the many supernatural forces which menace humans. From early childhood they are taught what to do and what not to do in order to maintain the right relationships with these forces.

Certain rites must be performed for every individual: if a baby is not taken to a medicine man a month or so after birth, he may fall sick or die. If he does undergo the proper rite (see chap. viii), he will be healthy, a good worker, and a swift runner. The girl who does not consult the medicine man at her first menstruation may be consumed by fire and may bring misfortune to all her relatives (see chap. x). Even some of the Presbyterian Papago feel uneasy unless this ceremony is performed.

Dead persons are potential threats to health and good fortune, and care is 753
taken to avoid offending them lest their ghosts return to bring sickness upon 761
their living relations. Until about thirty years ago, the Papago buried their
dead in little stone replicas of houses on a hill near each village. Personal 764
property was buried with the corpse—a man's saddles and bridle, his tools and
clothing, and any ceremonial paraphernalia he might have; the baskets a

764 woman had made and any favorite possession; the toys of a child. Food was often interred with the body. Then the house where the death had occurred was torn down, and the name of the dead person was mentioned no more.

Nowadays the dead are interred in cemeteries which are usually blessed by Christian clergy. The bodies are placed in coffins in white fashion, but sometimes extra clothing is buried with them. In some places Roman Catholic and Presbyterian Papago bury their dead in a miniature adobe house under the ground. The house of the dead person is usually not destroyed, particularly if it is a substantial one, and his name is more freely mentioned than in former times.

753 [821] But ghosts are still believed to bring sickness, returning as owls or other animals, usually at night. Most children are terrified of the dark, and many adults are distressed if at night they see an owl or coyote.

825 753 All animals are endowed with supernatural power, which they may use to help humans, but, if offended, to send sickness. This possibility, together with the fact that it may be a ghost, makes any animal a potential threat, hence the Papago fear animals and take great care not to offend them. If you imitate the bobwhite's whistle, the Desert People believe, your house will burn down. If rabbit blood touches your body or eyes, you will have sores or become blind. The breath of dogs will bring illness. Some animals are especially dangerous; the wild horse, for example, is associated with evil. Others are dangerous to children. These are only a few instances of widely prevalent animal superstitions.

Humans may escape the wrath of animals through avoidance. Children are taught not to play near gopher holes and to keep their distance from all other wild animals. Even those which are killed for food are handled as little as possible. But if one must be near animals, he may use magic to protect himself. For example, men who break wild horses take magical precautions against acquiring horse sickness.

753 181 Illness can also be brought on by thinking evil thoughts. The great emphasis placed by the Papago on peaceful living and their avoidance of quarreling has already been noted. A Papago is constantly adjured not only that quarreling is morally wrong but also that the kinds of thoughts that cause quarrels may bring illness.

753 831 According to Papago belief, a special sort of sickness may be caused by letting one's thoughts dwell too much on sexual matters, although the Desert People have a lively interest in sex, and many of their jokes and nicknames are based upon it.

000 If, despite all precautions, a Papago becomes sick, he goes to a medicine

If, despite all precautions, a Papago becomes sick, he goes to a medicine man to find out what transgression is responsible. Through the use of rock 755 crystals or other ritual apparatus, the medicine man will determine what supernatural force has sent the illness, and he will prescribe the cure. If an animal has been offended, the medicine man will suggest that a singer be summoned, for there is a song or set of songs for placating each of the most dangerous animals.[2] For sickness resulting from sexual thoughts a special set of songs is used in connection with clay figurines having prominent sexual features.[3] Thus the medicine man is primarily a diagnostician, and the singers work the cures; but sometimes the medicine man himself knows the proper songs. Both are always paid for their services. A medicine man may get five or ten dollars for a night's ceremony; singers usually receive only their food.

The medicine man can do more than find out the reason for sickness. He can 756 predict human behavior and recommend the proper measures to insure the right behavior of humans and of the nonhuman world. He can foretell the weather; if rain does not come, he determines the cause. In general, he tries to keep evil away from his village and to oversee the welfare of all its people. This is no small responsibility. Nearly every village has a medicine man, and he is a person of prestige and authority.

The medicine man's ability is believed to be supernatural power, which is latent in the individual until it is revealed to him in a dream. A dead man may appear to him to explain curing methods, or he may dream a new song. For some time thereafter (perhaps for years) the dreamer may not be entirely sure of his power, and he undergoes certain trials and consults recognized medicine men. The power shows itself in a man's ability to diagnose sickness, to "see through" a sick person's body and find in it the sore place, to determine the cause of the trouble and the proper songs to cure it. When a man becomes certain of his power, he dare not disregard it, or it will turn upon him as a dreadful sickness. He must accept the responsibility and begin to live up to it.

In the old days the medicine man's power was thought to come from I'itoi, the creator and elder brother of the Papago. Today the younger Papago trained in the mission schools may have their doubts about the source of this power, but faith in the medicine man is still firm. Almost all people except those of Sells and a few of the strictest Presbyterian converts seek the medicine man's advice and call in a white doctor only when the shaman's power does not seem to be effective or when it needs supplementation. Occasionally a medicine

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[2] For examples of these songs and transcriptions of the music see Jane Chesky, "The Nature and Function of Papago Music" (MS).

[3] This rite is seldom used today, for the medicine man now rarely diagnoses a case as "love sickness." (This translation is inaccurate, the Papago say, but they cannot phrase it more exactly in English.)

756 man will diagnose an illness as a "white sickness" for which a doctor should be consulted, but the only reason for which a white doctor is almost invariably called is a fracture.

The psychotherapeutic value of the medicine man's rites should not be underrated. When the doctor is thought to have supernatural power and has proved it by curing many patients, a sick man will have confidence that he too will be cured. In any sickness this is half the battle. Government doctors on Indian reservations are coming to see this point and to make use of the medicine man rather than to decry him.[4]

The preceding discussion has dealt with the "good" medicine man. In opposition to his power is that of the "bad" medicine man. A Christianized Papago 754 tends to feel that the power of the former comes from God and that of the latter from the devil. The man who is thus possessed must carry out the evil designs or die. He can produce illness or death in individuals by "shooting" them with poisonous substances; he can bring an epidemic on a whole village; he can interfere with natural phenomena or with sacred objects and thus bring drought or other disasters.[5] The only recourse against this evil power is to seek a "good" medicine man, who can take out the foreign substance with which the victim has been "shot" or prescribe the proper method of combating other evils. He can also identify the "bad doctor" and by magical means cause his disappearance or death.

Very few Papago do not believe in the witchcraft of the "bad" medicine man. Even a good Presbyterian who feels a sudden pain in his shoulder will suspect that he has been "shot" and hurry to the "good" medicine man for treatment. If he does not go soon, he thinks he will surely die.

Thus the Desert People depend upon their "good" medicine men not only 756 to cure sickness but also (and here the white doctor is no help) to counteract the many misfortunes which come from the hostile world of the supernatural or from persons possessed of evil. Despite the loss of the group ceremonies and the coming of Christianity, medicine men still receive their power and practice their cures, and the Desert People go on believing in and performing many of the rites they have followed for centuries.

[4] See chap. vii. For suggestive discussion of the values of the Indian therapy see Dorothea C. and Alexander H. Leighton, *The Navaho Door*, pp. 35 ff., and Dorothea C. Leighton and Clyde Kluckhohn, *The Navajo*, pp. 163–72.

[5] According to Papago belief, only medicine men can be witches. Certain other tribes hold that anyone can.

DIVERSE CREEDS

PAPAGO MUSIC

An important part of every Papago rite is song. The wine ceremony has its songs; so have the circle dances, the old village games, the *wi'iḳita* at Gu Achi. There are songs for curing diseases attributed to various animals. Other songs are sung by drunken men. Still others are used as lullabies. At all times the Papago love to sing—when they ride or work at home or in the fields, before they go to sleep, even when they waken in the night. Many of the songs came to the original singer in a dream, and most of them have a magic quality, whereby the singing will bring about some desired effect. 533

The songs express many different moods; they are humorous, wistful, daring, sad. They are full of metaphor, and the singer delights in obscure references. They are brief, understated, repetitious, but even when translated they carry a beauty that places them in the realm of true poetry. The music has distinctive rhythm and configuration.[6]

His songs mean much more to the Papago than poetry means to the average American. The songs are an integral and treasured part of the culture, and singers are respected persons. Perhaps with the new ways of life the songs will die out slowly; some people sing few of the old songs, and many of the ceremonies of which they were a part have gone.

The Papago love of music is also shown in the gusto with which they play and dance to modern Mexican and American songs at the fiestas. The youngsters delight in singing at school and spend their precious nickels in juke boxes in the trading posts. Even the Presbyterians, to whom the old songs are more or less forbidden, express their love of music in the singing of hymns. As often as possible the choir of one church will be invited to sing at another. For the Papago, singing is essential to living.

SONORA CATHOLICISM

In perhaps the majority of Papago villages there is a little adobe building with a rickety wooden cross over the door—the Sonora Catholic church. Sonora Catholicism antedates other Christian faiths on the Reservation today, for the belief and practice of Sonora Catholics are remnants of the teachings of the early Spanish missionaries, acquired either directly from the padres, or through other Indians or Mexicans. During the generations when no Catholic clergy came to Papaguería and the nearest priests were far away in Mexico, the faithful carried on as best they could the ceremonies and devotions of the church. 795

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[6] For translations of many Papago songs see Ruth Underhill, *Singing for Power*. Chesky (*op. cit.*) gives some translations and records Papago music.

795 With the absence of priests and the passage of time, much of the Roman creed and ritual vanished. In the Sonora Catholic churches, for example, there are no Mass, no hymns and prayers in Latin, no confession, and no marriage ceremony. Children are baptized by godparents, and the people bury their own dead.

In these little churches today the Papago sing and pray in Spanish to the Holy Family and to San Francisco Xavier, kneeling before the *santos* (sacred pictures and images) much as they do before the altars in their own homes. For church services people appointed by the villagers lead prayers, and a group of women ordinarily sing hymns; appointed committees of men plan the fiestas. On the whole, religious observances are fairly casual and individual. The Desert People like to manage their own affairs: the fact that their religion is largely self-conducted is one of its chief holds on the Sonora Catholic Papago and a major barrier to inclusion in the Roman Catholic church.

THE FIESTA[7]

527 796 Near the church in almost every Papago village is a dance ground and close by is a large adobe or ocotillo building with an open kitchen called the "fiesta house." In and around this building, the church, and the dance ground take place the great religious and social events of the year—the fiestas. Sonora Catholics celebrate only a few ecclesiastical holidays: New Year's, Easter, the Finding of the Holy Cross (May 3), All Souls' Day (November 2), Christmas, and the feast days of San José (March 19), San Juan (June 24), and San Francisco (October 4). No one village observes all these holidays, but each has its own celebrations, usually two or three a year, which for convenience are often held on week ends rather than on the actual feast day. They are given, the people say, "to show that we still believe in our religion."

Sometimes a single family will give a "small fiesta," but the important occasions, the "big fiestas," are community projects. One man, usually a person of influence, or a committee of men, assumes leadership, and all the families co-operate in the preparations. Church and fiesta house are swept, and blankets and rugs are placed on the floor. Benches are placed between posts marking the dance ground, and above are hung many-colored, crepe-paper streamers; sometimes the posts are even wrapped. The church is also brightened with streamers and paper flowers. Many other jobs must be done: wood is hauled for fires; food is collected; an orchestra is hired.

The fiesta usually begins in the afternoon or early evening with a procession, which forms just outside the church. If the village has a statue of the saint

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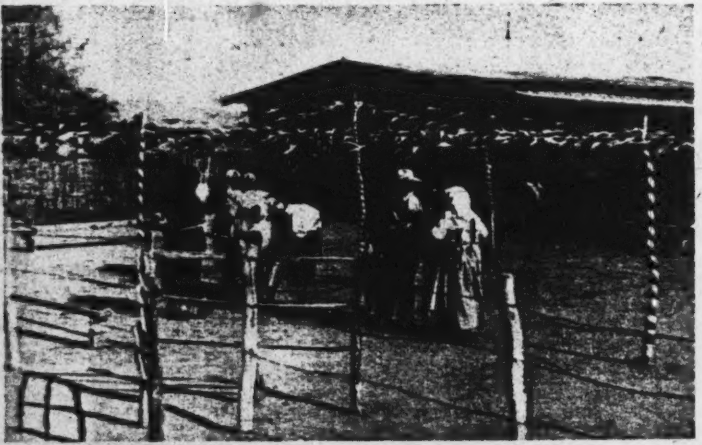
[7] Parts of this section are taken from Jane Chesky, *op. cit.*, pp. 19 ff.

[Text continues on p. 84. - Analyst]

4: Joseph et al D, E-5 (1942-1943) 1949
NU28 Papago NU28

PLATE X



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Rosamond B. Spicer

a) On the dance ground

Rosamond B. Spicer

b) Eating in the feast house

AT A FIESTA

[p.83]

527 being feted, it is carried at the head of the procession by a man or on a white
796 palanquin by a group of young girls. Children carry the smaller family *santos,* over which other children hold large wooden arches wrapped in white cloth caught at intervals with red ribbons or sprays of paper flowers. Still other boys and girls carry lighted candles. Behind them march the men and women who lead the hymns, and the crowd follows. The orchestra walks beside the main procession, playing modern dance music, while the crowd sings Spanish hymns, unmindful of the orchestra. At intervals the singing stops, prayers are said in Spanish, but the dance music continues. After marching around the dance ground and the church, the procession enters the church for hymns and prayers.

When the short service is concluded, the religious phase of the fiesta is at an end, and all except a few pious old ladies or mothers with tiny babies leave the church for the dance ground. The women sit on the benches or tend to the cooking, and the men collect in groups. Large fires are lit, and lanterns are hung on the posts.

527 The orchestra, composed of violins, guitars, and snare and bass drums, plays
533 two or three tunes, then the leader and the village chief make short speeches of welcome, in which the celebrants are bidden to enjoy the fiesta but to avoid drunkenness and to respect the property of others.

527 The children ordinarily start the dance; young girls, dancing together, are
533 next on the floor; finally, young men and even old people join in. Some fairly
535 recent jazz tunes are played, such as "Roll Out the Barrel" and "You Are My Sunshine," but most of the music consists of polkas and schottisches. Although some of the boarding-school Indians know the correct steps for these dances, almost everyone dances a sort of adapted foxtrot, the man usually grasping his partner tightly around the neck. Sometimes automobile lights are turned on the dancers with their gay rayon dresses and bright shirts. The crowd dances in a counterclockwise circle, and the schoolboy who tries to vary this pattern is sharply rebuked by the dancers he impedes.

At most fiestas a solo dancer (*pahkowla*) appears late in the evening. He is
527 usually an elderly medicine man who dances and makes jokes for the amuse-
535 ment of the crowd. Barefoot, with his trousers rolled up, he wears strings of cocoon rattles wrapped around his legs from ankle to knee. To the music of one violin and a guitar or harp, the *pahkowla* performs his dance with arms hanging loosely from the shoulders and his body slightly bent forward; he stamps with one foot and scrapes the other into position on the unaccented beat of the music. His jokes, directed at the men in the audience, are frequently

vulgar.[8] Toward the end of his dance men or women from the crowd may join 527
the *pahkowla*. Afterward the dancing goes on as before. Sometimes there are 535
fireworks, a chicken-pull, or an olla-breaking.[9]

Meanwhile in the feast house the male members of the host families are 527
serving all the guests with chili, tamales, coffee, wheat buns, possibly beans, [262]
garbanzos (chick-peas), a meat-vegetable stew, and usually rice pudding or stewed fruit. There is considerable drinking in the darkness away from the fire and, since it is impolite to refuse a proffered bottle, a good deal of drunkenness. The police are frequently invited to be present in order to prevent trouble.

The fiesta does not break up until all the food is gone, perhaps at dawn or noon of the following day. Then the orchestra plays "Home, Sweet Home" in waltz time to close the dance.

On certain feast days there are special observances. On San José's Day 527
friends tie silk scarves, belts, and other gifts on the arms of all the men and 796
women named for the saint, in a ceremony called "tying the Joses and Josefinas." The Joses and Josefinas must then reciprocate by pouring drinks for the givers and finally for the whole crowd. At the fiesta of San Francisco objects blessed during the annual pilgrimage are brought out for the edification of the crowd.

MAGDALENA

Faith in San Francisco Xavier and his good works has a deep hold on all 788
Papago Catholics and is one of the main foci of Sonora Catholic belief. To some of these Indians this saint seems even more important than the Trinity, and every family hopes to make a pilgrimage to his church at Magdalena in Sonora, Mexico, each year.

Padre Kino, who brought Christianity to the Papago, dedicated the Magdalena church in 1711 to the patron saint of the Jesuits, Francis Xavier. During the ceremony Kino took ill at the altar and died shortly thereafter. He was buried in the church near the altar. As the fame of Kino's work among the Indians spread, the church became a shrine to which great crowds came from all over northwestern Mexico and what is now Arizona to celebrate the saint's day, December 3. Apparently when the Franciscan order replaced the

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[8] The *pahkowla*'s dance and jests may be copied from the Yaqui *pascola*, whom the Papago see perform in the United States and in Mexico, particularly at Magdalena. On special occasions the Papago hire *pascolas* from Arizona Yaqui villages to dance for them.

[9] In chicken-pulling, a rooster is buried up to the neck and riders run their horses toward it, leaning over to try to pull it out of the ground. In olla-breaking, people take turns hitting with sticks at an olla full of candies which hangs from a corner of the church. When someone succeeds in breaking the olla, everyone scrambles for the sweets that fall out.

788 Jesuits, the date of the pilgrimage was shifted to the feast day of St. Francis
of Assisi, patron of the Franciscans, October 4.[10]

778 The change in the identity of the saint made no difference to the faithful.
San Francisco Xavier is their saint, who watches over them and helps to bring
788 rain to the desert. Pictures of the saint lying upon his tomb crowd the walls of
their little churches and the altars in their homes. Underhill remarks the
[761] sharp contrast between this "cult of a dead man" and the Papago fear of the
dead. She believes it quite possible that the Papago do not realize that the picture represents a sarcophagus; for, when the Papago buy a waxen image of San Francisco, they dress it in a silk nightshirt and lay it in a doll bed. "When asked why the saint is in bed, they are vague. He is a white supernatural, and that is his way. They cannot tell why he performs his miracles lying down, but they know he performs them."[11]

788 The annual pilgrimage to honor San Francisco is the greatest event of the
484 year for many a Papago family. For weeks ahead of time talk is of nothing
else. A cattle roundup and sale are held in September to procure enough food, clothing, and supplies for the two-hundred-and-fifty-mile journey and the week spent in Magdalena. The family *santos* must be packed carefully, so that they, too, can be taken to receive the blessing of the saint. At last the family sets out by wagon, truck, or car, sleeping by the road at night.

788 In Magdalena they camp together with other Papago families in a large
439 open field on the edge of town. Every day they go to market in one of the
two central plazas, where there are row on row of little booths, with fruits and candies, bakery goods, bright-colored clothing, knickknacks, and sacred objects for sale. The adults buy clothing and household equipment for the coming year and gifts for everyone at home, while the children wander about the plaza, gazing at the booths, spending a few nickels a day for sweets or occasionally riding the merry-go-round.

788 Menfolk are likely to be found in the bars around the second plaza, since in
733 Mexico they can get all the liquor they can pay for. Women worry because
their men get drunk and lose all their money to the Mexicans or are jailed for creating a disturbance. A loud-speaker blares out the names of those who have been arrested, and their wives obtain their release by paying a fine.

At least once during the week the mother (and perhaps the father) takes
788 the children into the church to touch the image of St. Francis. New *santos* and
bright ribbons bought at the shops outside, and the *santos* from home, are

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[10] At the mission of San Xavier del Bac near Tucson, also founded by Kino and later rebuilt by the Franciscans, the great celebration of the year is still on December 3, the day of the Jesuit saint.

[11] Ruth Underhill, "Acculturation at the Papago Village of Santa Rosa" (MS), p. 31.

[Text continues on p. 88-Analyst]

PLATE XI

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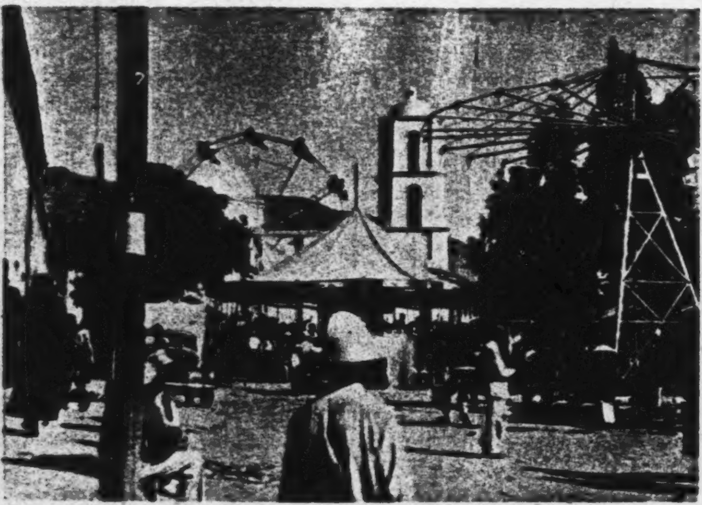

Jane Chesky

a) Fun in the plaza

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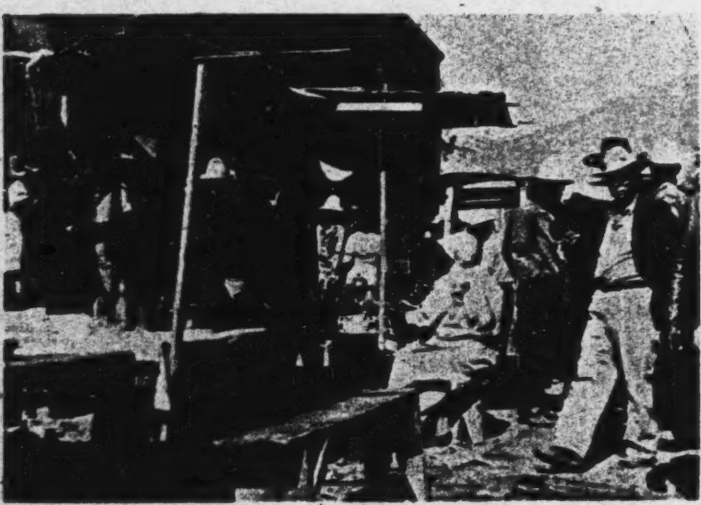

Jane Chesky

b) Lunch in the street restaurants

MAGDALENA FIESTA

[p.87]

788 brought along. Reaching the saint requires stamina and patience, for every inch of the building is crowded, and worshipers wait hours in line. Eventually the family push through to the transept to touch the *santos* and ribbons to the saint, to kneel and kiss the recumbent statue of St. Francis Xavier, and to make a donation. At last they make their way out of the church.

If there is a baby whom they wish baptized that he may have special good fortune, they must once again wait in a long line to take him to the priest in the baptistry. The priests, when they are free, are also asked to bless the ribbons and *santos* which will be, twice-blessed, so carefully carried home again.

The object of the pilgrimage is accomplished: they have renewed their relationship with San Francisco and assured themselves of his good offices during the coming year.

788 521 At the end of the festival week—or earlier if their money is all gone—the Papago family starts the long trip home. A day or two after their return relatives who did not go call to hear about the journey. Each visitor solemnly shakes hands with each pilgrim, crosses himself with the sacred objects brought from Magdalena, and receives around his neck one of the consecrated ribbons, which will bring him the blessing of San Francisco and good health during the year. Gifts are distributed, events of the journey are discussed, and visitors are feasted. The exciting days have passed, but they will be the subjects of talk and meditation for months to come, and the ribbons will be worn until they fall apart.

RITES FOR THE DEAD

769 Sonora Catholics, and some members of the Roman church as well, have several rites for the dead which have probably come up from Mexico. One is the ceremony on the death anniversary. On this day relatives and friends of the deceased gather, and the women sing and pray until midnight. Then a tiny coffin placed before the family altar is covered with confetti in a symbolic interment. The relatives change their mourning clothes for garments of bright colors; the guests are fed, and the ritual year of mourning is ended.

All Souls' Day is carefully observed. Graves are cleaned and decorated with wreaths and burning candles. In the evening a table is placed outside each house, with a place set for each of the dead of the immediate family. The favorite foods of the deceased load the tables, and candles are lighted on them. Then the family leaves, so that the dead may eat without endangering the living. At midnight the food is taken to the feast house, reheated, and eaten by all the people of the village.

4: Joseph et al D, E-5 (1942-1943) 1949
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DIVERSE CREEDS

THE OLD AND THE NEW

All the Sonora Catholics adhere to aboriginal beliefs. *Santos* are buried with the dead as food and clothing were in the old days. San Francisco and the rain spirits, Spanish prayers and the medicine man's eagle feather, are believed equally efficacious in bringing rain. During one severe drought, a medicine man decided that the cause lay in the inadequate care of *santos* which had been interred when their owner had died. So the medicine man directed certain women to retrieve the sacred pictures and bring them to the church, where a circle dance would be held. As the women were returning with the *santos*, a great storm broke. Thenceforth, these *santos* were kept in a shrine; they are pictures of San Francisco. 771 777 789

At another place on the Reservation, the women sought to end a drought by walking through the fields with their *santos* and singing Spanish hymns. This they did for four days. The rain came on the fourth day.

Thus the old and the new exist side by side or are inextricably blended. The Papago uses every means at his disposal to bring rain; he summons every power for good of which he knows to bring good luck and good health. Perhaps one or another of these powers is responsible; it does not matter, for the Papago has done what he could.

ROMAN CATHOLICISM

When the Franciscans renewed Catholic missionary activities among the Papago early in the twentieth century, most of the Indians were Sonora Catholics. To the priests these people were hardly Catholics at all; their faith, the priests said, was a "religion of externals," of whose real meaning they were unaware. 791 794

In the southeastern, central, and extreme northern parts of the Reservation the Franciscans began to teach the Roman creed, to introduce the Mass and other sacraments, and to make the Papago "good Catholics." At about twenty villages there are now Roman Catholic churches (see Map I), and many Papago have been baptized, attend Mass, and send their children to one of the five mission schools on the main Reservation.

In the western districts the Franciscans have made little headway, and most of the people remain Sonora Catholics. Here the first converts were made about 1929, when a few children were baptized, and in the following years priests came now and then to draw more of the people into the fold. Some of the converts, however, reverted to the Sonora faith after a difference with the priests, who have since referred to them with grave disapproval as "Montezumas." In 1941 one Franciscan began to make regular trips to the west to

794 celebrate Mass for the remaining Roman Catholic families, but no permanent
797 mission or school has ever been set up.

To the casual observer the Roman Catholic Papago appear not very different from their Sonora Catholic neighbors. Obvious differences are that the Roman Catholics go to Mass, are sometimes married in the church, and know some Latin prayers and songs. They try to have their children baptized and often send them to the mission schools.

Roman Catholic fiestas are like the Sonoran, except that the priest approves the day and puts in an appearance. The priests have discouraged the annual pilgrimage to Magdalena, but some Roman Catholic families still go. They also observe the year of mourning and set out their tables for the dead on All Souls' Day. They too seek supernatural aid in bringing rain, and Masses are sometimes said for this purpose.

Personal relations between members of the two groups are undisturbed by differences in belief. Roman Catholic parents may wish to have Sonora Catholic friends as godparents for their children.[12] Since the Roman church requires that the sponsors themselves be persons who have been baptized, the ceremony cannot be performed by a priest, but many parents are untroubled by this situation and quite content to have the godparents apply the holy water. Others have a Roman Catholic couple as sponsors and ask Sonora Catholic friends to officiate at a second ceremony. This easy adaptation of a foreign institution
[177] to suit their own circumstances is characteristic of the Papago.

Like the Sonorans, the Roman Catholics combine the old religion with the new. As has been previously pointed out, the priests have been less concerned with wiping out the old religion than have the Protestant missionaries, but they try to wean their people away from these "superstitions." One priest compares them with the belief in banshees and leprechauns, which, however, are real beings to many devout Catholics of Ireland. The mission schools taught by the Sisters of St. Francis have been important in spreading Roman Catholic doctrine and in combating the old beliefs by raising doubts in the students' minds.[13] Some "good Catholics" go to the wine ceremonies. Most consult the medicine men, and a few are themselves medicine men or singers.

794 However, the priests are not so tolerant of other magical practices. Recently
797 a non-Papago faith healer came to Topawa, claiming to perform miracles of
756 healing. Hundreds of the Papago flocked to camp near her headquarters and
waited several days for an audience. Papago informants, attributing to the

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[12] The reader will recall from chapter iv that the godparents are a part of the extended family and have social as well as religious functions.

[13] Other aspects of these schools are discussed in the following chapter.

healer their own philosophy, said that a few sick people were cured and that 794
"they might stay cured if they kept doing what she told them: being kind to 797
animals, never getting angry, being good to people." White informants said 756
that the healer tied pictures or printed prayers to the afflicted parts and claimed that her prayers would make them well. Both whites and Indians pointed out that the healer and the trader near whose store she held forth made a good deal of money. The priests in great indignation closed the doors of the church on the Sunday the healer was in town and threatened to excommunicate those who consulted her. No one but God, they are reported to have said, could perform miracles in Topawa.

The attitude of the Papago toward the Catholic clergy varies. In the western 794
districts many of the Sonorans—and particularly the "Montezumas"—look 797
upon them as people who are trying to upset Papago tradition, possibly as just another group of "Milikans" attempting to force an alien culture upon the Desert People. In the vicinity of the Franciscan missions, the priests have often been a considerable help to the people in practical ways. Some of them are friendly persons who have learned the Papago language and want to know their parishioners well. But many Papago still look upon them with a certain mistrust, and others feel that the clergy are too far removed from them in social and religious standing for intimacy and complete confidence. The people are also quick to point out any seeming neglect of priestly duties. However, there is little bitter antipathy to the priests; by all exept the intransigents of the West, they are considered part of the present scene. From them, as from other representatives of white culture, one takes orders when necessary and help when it is offered. But one's family and native social setting are at most times far more important.

PRESBYTERIANISM

The approach of the Presbyterian missionaries has been very different from that of the Franciscans. The Presbyterians have more systematically used Indians and the Indian tongue in spreading their gospel. In their four churches —at Sells, San Miguel,[14] Vamori, and Topawa, all in the southeastern part of the Reservation—Indians serve as ministers, and an Indian missionary is stationed in Gu Achi. Four of these Indians are Pima, and the other is Papago, but all conduct services in the Papago language. The congregations are governed by elected "elders," who are Papago. The Presbyterians have also capitalized upon the Papago love of music and lay emphasis on congregational

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[14] The church at San Miguel is also attended by the Presbyterians of the neighboring village, Choulic.

794 797 singing of hymns (in English) and on special anthems by the choir. The annual camp meeting at Sells, when Presbyterians come from other villages to spend a week or so camping near the church, attending services, and visiting with relatives, is somewhat in the tradition of the old intervillage activities.

Otherwise Presbyterian teachings have run counter in many ways to the Papago way of living. The old native beliefs are condemned as wicked superstitions. The use of alcohol and tobacco is officially prohibited to members, and dancing is banned. In short, the Papago are urged to live according to the moral code that prevailed in many American small towns a generation ago.

In the face of these attacks on their old and well-integrated culture, why did Papago embrace the new faith? The Desert People had already had a good many contacts with American culture, and some Papago felt that they could not remain static but must change with the changing times. One of the desirable changes was schooling for children, and the Presbyterian school near Tucson was one of the first available to Papago. The children usually came back active Presbyterians and became leaders in their communities.

The Papago themselves give various reasons why Presbyterianism appealed to them. Some found the preaching clear in contrast to the mystery of Catholic ritual and Latin hymns and prayers. Others liked the "strictness" of the religion. Many enjoyed hymn-singing and the social side of gathering for camp meetings (and undoubtedly the emotional release in public confession).[15] The use of Indians as preachers appealed to some Papago, for they like to receive guidance from their own people. They appreciated the chances to help run church affairs as elders and members of committees rather than having church government the concern of white outsiders only. Many say that they were made to feel that Presbyterianism stood for "progress" and "enlightenment," for good schools and hospitals as well as a new faith.

794 797 578 Whatever the reasons, many individuals in the five villages accepted the new faith. Contrary to the old pattern, this change was not always made by whole families, and group solidarity was badly shaken. Nearly twenty years of bitterness followed. Families were split when some brothers and sisters retained the old faith and others accepted the new. Since becoming a Presbyterian was in itself a condemnation of many of the old ways—the ceremonies, the medicine men's rites, Indian marriage customs, drinking, and dancing—resentment followed, and the air was charged with bitter quarrels. The schism spread from the family to all aspects of life. Economic and political co-operation became almost impossible.

Finally in 1929 the air was cleared in a battle over Agency policies, when

[673] [15] The sins usually confessed are, interestingly enough, neglect or bad treatment of relatives.

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[578]

quarrels over religion were overshadowed and people took sides without reference to creed (see chap. vii). During the past decade the bitterness has died down, for Protestants and Catholics have found that they must work together if the tribe is to better its status. The Presbyterians are seeing the necessity for more tolerance of the old culture. Some are again visiting the medicine men; some set out their tables for the dead in November. The younger generation of Presbyterians is not so defensive, although, as we shall see in chapter xviii, the new faith has not been without influence on the personalities of the children. The two groups are beginning to attend each other's ceremonies, and, more important, family relationships are improving. Trouble still flares up occasionally, but the fact that family ties and obligations have reasserted themselves speaks for the underlying strength of these relationships. Even white leaders of the two churches are beginning to feel that the Reservation is big enough so that everyone can get along.

The actual number of Presbyterians is smaller than the effects of the new faith might lead one to expect, for only in five villages are there Presbyterian congregations. No new churches have been built since 1920, and there is only one school—at San Miguel. In the year of this study there were no Presbyterians west of Gu Achi (in the center of the Reservation), and no missionary work had been attempted in the western districts.

Though the number of Presbyterians is relatively small, it includes many men who can take leadership in the Papago world where it meets the white world (as in the tribal council) and men who, according to white standards, are capable of holding jobs. Several reasons have been suggested for this high proportion of leaders: that the Presbyterians learn English better through the English hymns which are so important in church ceremonies; that they realize more clearly the benefits of education and are more persistent in their efforts to attain it; that Roman Catholic children are handicapped by the training offered in the mission schools; that the Agency gives unconscious preference to Protestants in hiring employees; that the southeastern part of the Reservation where Presbyterians live has had longest contacts with whites and thus is more acculturated. There is probably truth in all these contentions. In the past, Presbyterian children have seemed the most anxious for higher education and have gone off the Reservation for it; perhaps this accounts for their greater employability. The Catholic schools were poor, but their reorganization in the thirties has improved them. Likely the real reason for the high proportion of Presbyterian leaders is a combination of all these factors, with the probability that it was the more aggressive individuals, dissatisfied with the old ways, who adopted the new, not only in religion but in education, economics, and politics as well.

Chapter VII

THE PAPAGO AND OTHER PEOPLES

773 ONE of the Papago myths accounts for the division of mankind into races. A long time ago, after the Papago had emerged from the underworld, they were plagued by an eagle who killed people and carried them off to his aerie. No man was able to kill the eagle, and at last the Papago called upon their hero I'itoi for help. When I'itoi had conquered the vicious bird, he began to revive the corpses of the victims. Those who had been dead the longest and were most decayed and pallid he turned into white people. Because they had been dead too long to remember anything, I'itoi gave them the power of writing, so that they could put things down to help their memories. From corpses who were better preserved and came up kicking, he made the Apache, who always gave the first blow in battles but in the end were conquered. The Papago came up fighting, but they always finally won. Other Indian tribes were created in similar fashion (there seems to be doubt as to the origin of Mexicans and Negroes). This story, the Papago say, proves that all men are of the same race as the Papago, but they themselves are "the people." The center of the universe is the sacred mountain, Baboquivari. Papago medicine men are superior because they have greater power than other people. The Desert People themselves are superior because they have made a living from the desert as no one else has been able to do.

186 It is interesting to note that the Papago, though modest and retiring as individuals, reveal in their tradition the ethnocentricity characteristic of most peoples. They also have their stereotypes for outsiders. In this chapter we shall discuss the Papago's relations with, and attitudes toward, other groups.

OTHER INDIANS

609 For years the Papago have had close contacts with the Pima of the Salt and Gila River reservations, most recently through work in the cotton fields and truck farms owned by Pima. These people are considered by the Papago to

be much like themselves except for the fact that, through years of schooling 609 and other contacts with white men, the Pima have become less Indian. But the Papago do not regard the change taking place in the Pima with envy or admiration; rather they think of it as an unfortunate weakness, a mistake on the part of their northern kinsmen. Furthermore, they call the Pima lazy. Still, the Papago do not look upon marriages between their own young people and Pima with great disfavor, and many Papago today acknowledge Pima blood and visit relatives on the Pima reservations.

Yaqui Indians frequently work with Papago in the cotton fields and mines. These people the Papago also designate as fellow-Indians, but farther removed from themselves than the Pima, and, though there are occasional Yaqui-Papago marriages, they are not generally approved. However, the Yaqui are admired for their dancing, and the Desert People never tire of watching the Yaqui *pascola* dancers perform.

The Papago know other Indians too. The Apache (called in Papago "The Enemy") are thought of as mean and cruel, albeit brave and successful fighters. Tribes who live farther away are becoming known to the younger Papago in off-Reservation boarding schools, and a number of marriages between Papago and other tribes—such as Hopi, Navaho, Mohave—have resulted from school romances. In such marriages a Papago boy usually brings his bride to his own village, but a girl goes with her husband to his tribe. But the Desert People do not think of intertribal marriages as the ideal, and no more than [582] ten years ago one Papago pair forbade their daughter to marry outside the tribe because "it is not allowed." Now, however, newcomers take their place in the family without criticism.

MEXICANS

Mexicans[1] are known to the Papago as "Smarties" (*chuchkam*), and relations between the two groups vary. At present Mexicans living in the United States and the American Papago usually meet on friendly terms. Several factors tend to draw them together: in the towns both groups do the same kind of low-paid work; they are equally discriminated against by the white Americans, who frequently cannot tell them apart; and they often have a common religion in Catholicism. A Papago will trade at a Mexican store in preference to an American. When he is working in a town, he will live either with his tribesmen in "Papago Town" or with Mexicans (and perhaps lower-class white Americans). Papago in Tucson live in the "Barrio Libre" along with Mexicans and Yaqui.

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[1] For use of the term "Mexican" in this study see the Introduction, p. xiii.

THE DESERT PEOPLE

609 439 273 For the Papago a Mexican has one transcendant virtue: he can buy liquor legally, as the Indian cannot do. A Mexican is usually willing to resell it to a Papago at a neat profit and then, at times, when the Papago is drunk, to relieve him of the rest of his money. In any trade relation Mexicans rarely hesitate to take advantage of the Papago, who as a rule are less experienced in money matters. The Papago are aware that the "Smarties" bear watching, and their resentment sometimes breaks out in street fights. For the most part, however, the Papago accept exploitation docilely in order to insure their liquor supply. Furthermore, the Mexican coats the pill with ostentatious familiarity and superficial fraternity.

That the liquor trade is the chief link between the two groups seems apparent from the fact that there are few friendships between individuals and little real social intercourse. The occasional Mexican who works at the Agency is ignored by the Papago; however, this may be due in part to the Mexican's own feeling of superiority. Mixed marriages are frowned upon, and Indians known to have or suspected of having Mexican blood are looked down upon by full-blood Papago.

TRADERS ON THE RESERVATION

609 439 Outside of Sells, the Agency town, the trader may be the only white person living in a Papago village, and his contacts with the Indians may be so intimate that he becomes the chief representative of white culture. Nowadays, with more schools in the remote areas and more visits from government officials, other white contacts on the Reservation are less infrequent, but the trader is still a main channel of white culture.

The influence of the trader and the Indians' attitude toward him vary, of course, with his personality and with the local situation. One of the two white traders in the western districts is a woman who speaks Papago and has sympathy and understanding for Papago ways. She gives the children candy, attends fiestas, and contributes generously to the feasts. In addition, she renders a variety of social services, such as translating and writing letters and driving to bring a medicine man. A trip to her trading post is likely to be an all-day outing, for the Indians come not only to buy but to consult the trader and to ask for her help. They select and pay for their purchases one by one, jokingly haggling over the price of each article. The western people respect as well as like this trader because she allows no one to take advantage of her and stands her ground in conflicting issues; she rents her car at the same rates as Papago owners; and, by keeping informed of cattle sales, she sees that bills are paid when possible. All the Hickiwan Papago are loyal to her and trade with her in preference to any other white on the Reservation.

In the eastern districts there are more stores, and trade is generally brisker, 609
so that there is not so much opportunity for extended personal contact; then, 439
too, there are other white people to ask for advice or assistance. Hence the relationship between trader and Indian is likely to be more impersonal than in the West. Furthermore, there are a few Indian traders to supply some commercial needs.

THE PAPAGO AND GOVERNMENT: THE AGENCY

The three Papago reservations are under the jurisdiction of the Sells 648
Agency[2] of the United States Bureau of Indian Affairs, headed by a superin- 657
tendent and staffed by about two hundred administrators, technicians, clerical and manual workers. In addition to the Administrative Branch, which has the general "housekeeping" duties of the staff, the Agency is composed of three branches: Indian Resources and Engineering (whose functions were discussed in chap. iii), Community Services—Education, Health, Law and Order, and Social Service—which are discussed below. This staff performs for a group of nearly seven thousand Indians many of the functions which in other parts of the country are the province of such local and state organizations and officials as boards of health, education and welfare, state and municipal highway departments, county agents, boards of supervisors, and public safety departments. In most of its programs the Agency staff works in close co-operation with the tribal council, and it seeks to gain widespread public support before new developments are initiated.

PAPAGO SCHOOLS

As previously noted, the Papago have a short life-span, two-fifths of the 165
population being under eighteen years of age, according to ration-book data 871
in 1942. The school-age group alone (six to seventeen years, inclusive) numbered 1,681 children—25 per cent of the population. Not only a much higher proportion of the people are of school age than is customary in other parts of the country, but many of the children live in tiny remote villages, where roads are only wagon trails. Thus the problem of providing schools is greater.

There were in 1943 eighteen day schools on the three Papago reservations. 871
Of these, eleven were maintained by the Indian Service, all of them on the [658]
main Reservation. The Roman Catholic missions had six day schools (one on [797]
the San Xavier Reservation) and the Presbyterians one at San Miguel in Chukut Kuk District. Off the reservations, Papago children attend four boarding schools and various special schools and sanatoriums run by the Indian

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[2] Renamed "Papago Indian Agency" in 1948.

871 Service, one Presbyterian and three Catholic boarding schools, and a few public schools. Teachers on the Reservation are white persons or thoroughly acculturated Indians of other tribes, and the majority are women.

In 1941–42, the last school year before a great number of families left the reservations for war work, 1,469 Papago children were enrolled in school. Of these, 222 were under six or over eighteen years of age, so that only 1,247 of the 1,681 children of school age were enrolled. However, this number included 285 children who had enrolled in more than one school during the year or were living permanently off the reservations, so that 719 school-age children (about 44 per cent of the total) were not enrolled in any school during the year.[3]

Furthermore, attendance of the children who did enrol was very sporadic, the daily average of all schools being only 460 despite the fact that transportation is provided for those who need it. There were many reasons for such poor attendance: some of the schools are poorly located; many families take their children with them for seasonal work off the Reservation; and some need the help of their children with crops and herds. Two villages still migrate annually between fields and mountains. Furthermore, no pressure is exerted by parents on children who do not wish to go to school, and there is no official requirement compelling them to do so.[4]

191 871 The problem of curriculum and method is as difficult as that of attendance. The great majority of Papago children know at most only a few words of English when they enter school. Only a third of the adults speak it; perhaps a tenth can read and write it, and a negligible number do so habitually. In the two western districts when this study was made, no Papago over forty spoke English; only ten of the parent generation did so, and, of these, four subsequently moved off the Reservation. As a general rule, even parents who know English seldom use it in the home, hence the child's first years of schooling must be mainly devoted to learning the language in which he is taught.

871 In the government schools the official aim is to aid the development of the child's personality and his adjustment to the world in which he will live, whether on or off the Reservation. The immediate focus is upon teaching the children how to make a living, to understand and make use of white culture. Methods are generally of the less extreme "progressive" type, and efforts are made to use teaching materials directly from Reservation life. Religious in-

[3] Data from U.S. Bureau of Indian Affairs, *Program, Papago Reservations, Sells Agency, Arizona*, p. 30.

[4] Since the period of this study, the tribal council has voted to make school attendance compulsory (Tribal Ordinance No. 11, January 29, 1945). The present superintendent reports that "efforts to enforce this ordinance in some areas have been successful."

struction by missionaries is permitted one hour a week, with the children 871
divided according to the creed of their parents, but none are forced to attend. Corporal punishment is forbidden.

The success of this method naturally depends heavily upon the interest and 875
ability of the individual teachers and their supervisors. Teaching shy children of varying ages and attainments in a language which is not their own is difficult, to say the least. Understanding of and sympathy for a culture so different from the teacher's own are not to be acquired merely by good will. They are essential, however, to success in teaching and living in an Indian village, for the school is intended to be a community center as well as a place for children to learn "the three R's." Teachers are encouraged to organize adult classes in English and in various phases of homemaking and agriculture, and they often act as liaison between the people and the Agency. They give social services on an informal basis: they use the school phone to summon a doctor or get his advice for the sick; they often supply transportation to the villagers; they write letters; sometimes their advice is sought in personal problems. Some teachers occasionally help in farming. A few have entered into the life of the community, studied and recorded the ways of the village, started various enterprises, and in almost every phase of village life have made their influence felt. Most teachers do not reach this integration with the community; but, whatever the relationship, the teacher in the more isolated village may be one of the few white people with whom the Indians have much contact. Thus the attitude of the people toward her often determines their attitude toward white society.

The aims of the mission schools, on the other hand, are largely religious. 871
Their methods are more like those of parochial schools in other parts of the 797
country, with standard textbooks and materials not particularly suited to the experience or temperament of Indian children. Corporal punishment is used. In the Catholic schools the mien of the teaching sisters is rather distant, and instant obedience is demanded. These teachers have little to do with Indians other than their pupils, but the supervisor of the Catholic schools is much closer to the people than is the Reservation principal. In his capacity as priest, he has continual contact with his parishioners, as do the other Fathers, one of whom has learned the Papago language.

Formal schooling on any very large scale is too new among the Papago to 871
make possible any valid evaluation of the results of either government or religious schools. It may be significant, however, that more children from government than from mission schools go on to institutions of higher education.

It is obvious that much needs to be done before adequate education is avail-

871 able to all Papago children. At present there is no secondary education on the reservations, and, although high-school subjects are offered at both government and religious boarding schools in the vicinity, attendance at these schools is limited by the fact that they necessitate children being away from home for long periods. The extension of the present system to provide junior high schools and a central senior high school at Sells, with boarding facilities for those who need it, has been proposed by the Agency. The argument for the latter is that children in villages too remote for daily bus transportation and those whose parents work off the reservations for long periods would attend more regularly if there were boarding facilities at day schools. Another pressing need is some general supervision of all schools, so that a co-ordinated and consistent educational program may be offered.

Proposals for the improvement of Papago education do not emanate solely from the Agency staff, for most of the Papago want some sort of schooling for their children, as they realize the value and the practical necessity of speaking English. Thus it is the rare family that does not make some effort to send its children to school. However, it is also the rare family that sends them regularly and gives them the kind of push and encouragement that many white children receive. Adults see some of the values of schooling, but they leave it to the children to make the effort to attain these values.

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186 But the Papago are by no means completely satisfied with the type of education available on the Reservation. In the past, schools were established without regard to the wishes of the villages, and there was strong resistance in some areas; therefore, in recent years schools have been set up only on request. For example, the Hickiwan District school was established at the request of a few families, but until very recently it was opposed by several other families who so controlled the rest of the population that a very small proportion of the children attended. These conservatives saw the school as a symbol of encroachment, one of the improvements which might make their land more desirable to whites and as one of the many techniques of the white man for doing away with Indian life. The controversy led to actual hostilities. Now, however, opposition has died down, and about half the children attend. The families in this district who send their children to school are those who see the material advantages to be gained. They have no intention of giving up "being Indian," but they believe that being able to speak English *when necessary* will bring better jobs, more money, clothes, amusements, and food luxuries—things they have come to esteem and desire.

871 Even the more acculturated Papago are not usually in full accord with the aims and methods of government schools. Many of them went to the old

government and religious boarding schools whose aim was to make Indians as rapidly as possible into white men. Strict and often military discipline prevailed. Papago who went to these schools often feel that the present government schools do not make the pupils work hard enough and that discipline is lax. The boys, they say, are not receiving the rigorous training for leadership that they themselves acquired. They admit, however, that the present religious schools, where more conservative curriculum and strict discipline prevail, do not produce leaders either; they train for obedience rather than leadership. 871

How much the education offered in either the religious or the Indian Service schools "takes" appears to be partly a matter of the child's attitude and that of his parents. Many who have been in school learned so little that their schooling seems to have made little difference to them. On the other hand, most of the village chiefs and the rising leaders are men who have learned to speak English in school, and the majority of them come from districts where schools are well established. In such districts are seen the tin roofs, stoves, refrigerators, cars, and radios of the more acculturated Papago, the desire for which is often acquired in school. There is also evident among the Papago who have been to school a tendency to mingle more freely with people other than relatives. School friendships are helping to break down the old barriers between kin and nonkin and thus are helping to make the Papago more one people.

PAPAGO HEALTH AND MEDICAL SERVICES

One of the prime objectives of the Agency is to improve Papago health. 163 165 The birth rate on the three reservations in 1943 was estimated at 42.3 per thousand population, as compared with 23.9 for all United States Indians, and 19.5 for the country as a whole. But the estimated death rate was 32.5 per thousand, as against 13.3 for all Indians, and 10.5 for the United States. In proportion to population, many more Papago babies are born than white, but a much larger proportion die; infant mortality in 1943 is believed to have been 258 per thousand live births as against 40 for the country as a whole. Tuberculosis is exceedingly common; while the exact incidence is not known for lack of examination facilities, the mortality rate was estimated at at least 300 per 100,000 populaton, on the basis of diagnosed cases alone, or about seven times the rate for the country as a whole. Nutritional diseases and bad teeth are also common.[5]

To cope with these medical problems, the Agency has one thirty-eight-bed 743 hospital at Sells,[6] with a normal staff of one white senior physician and six

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[5] For a discussion of the health of Papago children see chap. xii.

[6] This hospital burned down in the summer of 1947.

743 nurses, both Indian and white. There is also a white field doctor, who is assisted by two field nurses. Each of the field personnel visits specified villages at regular intervals, always looking over the school children, immunizing, and visiting families where he is asked to come or where he knows there is sickness.

Many people in the western districts do not welcome the field medical staff, and only recently have the conservative families, who refuse hospitalization entirely, accepted medicine or advice from them. On the other hand, a number of Hickiwan people from the more "progressive" families use the hospital. Eastern Papago are much more often willing to go to the hospital and to consult the field nurse and doctor. Much depends upon the white doctor's attitude toward Indian beliefs. If he does not openly condemn the medicine men and gives due credit to their effectiveness, if he is willing and able to answer a call under any circumstance, he begins to gain the respect and co-operation of the people. But if he seems dogmatic and unsympathetic to the Indians, they mistrust and fear him.

There does not seem to be any good reason why white medicine may not be accepted eventually by the Indians, if patience and understanding are shown by doctors and nurses. The Papago use the same word for white doctors as for their own healers, and they respect and appreciate competence and sympathetic treatment. School children who have frequent contact with white doctors and nurses slowly overcome their fear.

The Agency feels the need for increased hospital facilities and for more doctors and nurses stationed in strategic parts of the Reservation. It recognizes, however, that no amount of facilities will improve the health of the Papago unless the Indians can be brought to use them and that the need for hygiene and sanitation must be realized by the people themselves; consequently, there is continuous effort to teach standards of healthful living in the schools. It is also hoped that co-operation may be developed between native and white doctors. To begin with, it is proposed that medicine men might be given sufficient knowledge of modern medicine to enable them to see which of their cases may respond to their own type of treatment and which must be referred to white doctors. It is also proposed that Indian nurses and midwives be trained in infant and maternal hygiene. It will be a long time before white medicine has the confidence of all the Papago, but if elementary rules of sanitation, hygiene, and nutrition are taught with skill and patience, the Papago may be expected to adjust to these standards as successfully as they have to other "white" ideas.

SOCIAL SERVICE

748 The Agency social worker performs a number of services for the Papago. Assisting Indians to off-Reservation employment became increasingly

important during the war years. However, by far the greater part of the 748
social worker's time during the war years was spent on Selective Service matters, including registration of Indian young men, assistance in completing questionnaires for the Tucson draft board, investigation of dependency, and getting the selectees to places of examination and induction.

Relief rolls are small; the peak case load was reached in January, 1943, with 746
123 families, but five months later the total was only ten cases. There is little [738]
delinquency, only ten cases having been handled between 1940 and 1945.

LAW AND ORDER

The maintenance of law and order on the Papago reservations is under the 625
judicial authority of the tribal court, which is discussed in the following section, but the Indian Service employs a chief of police, two policemen, and two judges—all Indians. The Papago are a law-abiding people who commit few crimes of violence.

The chief difficulty of the police lies in enforcing the Indian Liquor Law. The Indian police attempt to prevent trouble on occasions when there is likely to be drinking, and they are frequently asked in advance to be present. But there are so few police and the territory is so large and so near to a convenient source of illicit liquor—Mexico—that legal sanctions are not very effective.
Indian judges impose jail sentences for drunkenness, and off the Reservation [689]
state and local authorities also arrest intoxicated Indians.

AGENCY STAFF AND INDIANS

Nominally, every staff member up to and including the superintendent is 657
accessible to any Indian who desires to talk with him, but relatively few Indians seek such contacts. To consult anyone except the teachers and the field medical staff, a Papago usually must go to Sells, where the white Agency milieu does not encourage confidence. Most of the people feel that this is a different world, where it is little use for them to go except when summoned or perhaps to ask for a job. Even political leaders find a barrier between themselves and the Agency personnel.

This is not the result of official policy, and in recent years determined efforts have been made to bring together the administrative staff and the people for whose welfare they are working. Yet, the size of the Reservation and the large amount of detailed work to be done by a small staff make it difficult even for division heads, whose planning should be on the basis of frequent consultation with the people, to confer with individual Indians often or at length. Only teachers in the isolated districts have prolonged and intimate contacts with the villagers.

THE DESERT PEOPLE

WORKING FOR THE GOVERNMENT

464 Most of the hundred-odd Papago who work for the Agency live with their families in Sells, although they often keep homes and fields in their own villages. These employees come mainly ~~from the~~ eastern districts and belong to the *kokololoti* and *totoköwany* dialect groups, which have had longer contacts with whites than the others on the Reservation. They are predominantly Presbyterian, but there are also a few Catholics and non-Christians.

In lean years the steady wages offered by the Agency and the wider possibilities for recreation drew Papago to Sells. However, occasionally social problems arise. Girls who have gone to the Agency town have been known to get into trouble, and on one occasion within the last few years a number of girls were rounded up by the Indians and quietly sent back to their own villages. Papago children who have been brought up in Sells seem more aggressive and American in their behavior than others, and often the Papago say that the mischievous pranks and more serious escapades of school children "always [575] start in Sells." Then, too, some of the adults who work for the government are scorned by other Papago as "Agency Indians" and thus are separated from their own people, on the one hand, and from the white staff members, on the other.

THE PAPAGO AND GOVERNMENT: THE TRIBE GOVERNS ITSELF

619 The Papago tribe as a political unit has existed for less than ten years. Before that time, each village handled its own affairs, and related villages co-operated economically and socially, but there was no tribal government as such.

619 575 There were, however, attempts to bring together leaders from the various villages and dialect groups. For some years before the establishment of the Reservation, some of the headmen and other leaders felt the need of government help in getting water developments, schools, and hospitals. They organized the Good Government League, which met regularly to discuss ways and means of attaining these ends and to draw up petitions for assistance. Characteristically, the group was loosely organized and it was completely Papago. A storekeeper lent the group a building in which to meet in bad weather, and government employees addressed them on request; but apparently no whites were responsible for the organization or its activities.

648 578 575 Opposition to the League developed among some of the old headmen and certain of the more conservative communities. After the establishment of the Reservation the feeling increased because, it was alleged, a small group of League members "ran the Agency" and "the superintendent always called

them in and did what they said." About 1925 half of the members split off 648
into the League of Papago Chiefs, a group in opposition to the superintendent 578
and the old League. The conflict rapidly became acute. Agency employees and 575
other whites (including missionaries) supported one faction against the other. The opposition won out, and the superintendent was removed in 1929. The Papago say that the influence of this split still exists and that the two groups oppose each other to this day, though the two leagues have officially disappeared.

Another attempt at organization was made when three lawyers offered to 648
represent the Papago in pressing certain claims against the United States. 578
The Secretary of the Interior required that three Papago representatives be
elected by a general council of the tribe and be authorized to sign the contract 657
with the attorneys. Of the four men elected as officers of the General Papago Council, two came from the superintendent, and one had been neutral. All of them were boarding-school men from the southeastern part of the Reservation. The ensuing negotiations resulted in strife and factionalism among the Indians, for the rumor was circulated that the executive committee had promised the lawyers large sections of tribal land. Even near-by non-Papago towns were alarmed lest clear titles to their lands be impaired. When, at the recommendation of the lawyers, the Reservation was withdrawn from all types of mineral entry (restored with the Reorganization Act), there arose a real hue and cry from all sides. The attorneys' contract was not renewed in 1934, and most of the Agency personnel was transferred.[7]

When the new superintendent arrived in 1934, he saw the Reservation 657
largely in economic terms and began to reorganize it to develop the cattle industry; his plans included systematic range management, grazing districts with fences, a cattle association, and an organization to provide for local self-government. In October, 1934, representatives from twenty-five villages met in Sells and signed an agreement with the government providing for some of
the economic portions of this program.[8] The Indian Reorganization Act was 619
accepted on December 15, 1934, and the Papago Tribe became legally a political unit.

To provide a basis for self-government, the Papago elected a committee of 666
twenty men to draft a constitution. Only three of the western villages, how- 642
ever, participated in the elections, and five of the six-man committee which ironed out differences of opinion were *kokololoti* members of the southeastern

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[7] Account drawn from U.S. Bureau of Indian Affairs, *Annual Statistical Report, Sells Agency . . . , 1935*, pp. 35–37, and from personal inquiry.

[8] The cattle association never materialized because of too strenuous opposition.

666 642 dialect group. The people insisted that tribal law and custom should be the basis of the constitution. Some of the provisions based on white concepts, such as fenced districts, met with great opposition, but the constitution was finally ratified in 1936 by more than two to one, in an election in which about a third of those entitled to vote did so.

642 The constitution divided the main Reservation into nine districts, the small reservations at San Xavier and Gila Bend constituted two additional districts. Each of these districts was empowered to elect a council to provide local self-government; each district council in turn was to send two delegates to the tribal council, who should continue in office for two years or until recalled and replaced by the district council. District councils were formed shortly after the constitution was ratified, and the tribal council was set up soon after. It has functioned regularly ever since.

THE TRIBAL COUNCIL

646 642 The constitution provided that the welfare of the tribe as a whole should be in part the responsibility of the tribal council and that it should carry full responsibility for tribal business enterprises discussed in chapter iii: arts and crafts, the tribal fair and rodeo, loans, and the tribal herd. The tribe through its council has full rights of defining membership, administering tribal law with regard to members of the tribe, levying taxes, and handling its own monies. In all other spheres the superintendent of the Reservation has final authority, but conscientious efforts are made to introduce no program which has not been thoroughly discussed and agreed upon by the council. The majority of matters discussed in council meetings are brought up at the suggestion of the superintendent, but members know that their recommendations, objections, or suggestions will be carefully considered. If they defeat an Agency proposal, it may be brought up for further discussion at a later time, but their approval is essential to the success of any program.

As with any representative body, much of the value of the council's work depends upon the support of the general public. The system set up by the Papago constitution is actually a structure of white concepts of majority rule and representative government superimposed upon the old system of unanimous agreement in village councils. It will take time for the people to learn to manipulate this new political tool.

646 642 184 Generally speaking, it is the men from the eastern districts who are active in tribal politics; many of them have learned white concepts of government in boarding school. It is obvious that leadership remains in the hands of a few, though a quorum is always present at council meetings, and all members listen carefully

to the discussions. The people as a whole have taken little part, and there are 646
no sanctions to reinforce the status of delegates from many of the districts. 642
So long as there is a leader who is vitally interested in having his district 184
represented in the tribal council, the district organization remains alive; but, if the leader loses interest or leaves, it falls apart. There is no popular demand for representation in the council. The people do not have regular district meetings, and they delay elections long past the time specified in the constitution. All this is an indication of a political system in its infancy which is not yet an integral part of the life of the people.

Popular interest and organization have lagged particularly in the western districts. In Hickiwan there have been "progressive" men who were interested in tribal organization ever since the days of the Good Government League, but there was always fierce opposition from the conservative element, which rejected white institutions lock, stock, and barrel. The deadlock between the two factions continued for many years, and the bad feeling was augmented by a cattle feud between the leaders of the opposing parties. In the thirties a compromise was reached, whereby the two groups were separated in different villages. Between 1940 and 1943 two of the conservatives served sentences in federal prisons for assault with deadly weapons on Indian police, and three for refusal to comply with the Selective Service Act. With the removal of these men, opposition to Agency proposals and to the tribal council diminished; nevertheless, the Hickiwan delegates to the council who were elected at that time showed little interest in active organization of the district, and its participation in tribal matters was negligible. Gu Vo, the other western district, had no representatives at the council meetings for two years preceding the present study.

Despite all these handicaps, the council has to its credit a number of real 646
achievements. The tribal herd has helped to improve Reservation cattle, and the various other tribal enterprises have been successful. The method of
financing these projects—a 3 per cent tax on all livestock sales by private [651]
owners—met with strong opposition at first, but the council's resolute stand on the matter indicates that the members are beginning to feel their responsibilities and that they may become a real power on the Reservation. Recent council activity in planning for the adjustment of returned soldiers and postwar economic developments points in the same direction. Much will depend on the quality of leadership: if the council continues constructive and forceful action instead of degenerating into a group of Agency "yes-men," the tribe may unite in backing up the council. Much will depend too on the policy of future superintendents. The Papago are independent, and they do not like to

646 be rushed or pushed into action. If these qualities are respected by government representatives, they are more likely to gain the support and active participation of the council in their common responsibility—the welfare of the Papago.

THE TRIBAL COURT

671 Off the reservation Indians are subject to state and local law. On their reservations they are subject to federal law in regard to ten major crimes: murder, manslaughter, rape, assault with intent to kill, assault with a dangerous weapon, arson, burglary, larceny, incest, and robbery. All other offenses are dealt with according to the tribal law.[9]

The Papago code of law and order, drawn up by a committee of the tribal council,[10] is in the main a codification of the old laws and customs of the people. However, it includes several white innovations such as the requirement of a marriage license and ceremony and provision for probating estates and appointing guardians.

692 On the Papago reservations law is administered by a tribal court and Indian police. The tribal court is presided over by Indian judges whose appointment by the superintendent must be approved by the tribal council. The constitution provides for three judges in all, but at the time of this study there was only one on the main Reservation and one at San Xavier.

626 As noted in chapter iv, many difficulties which might come to court are
696 settled within the family without recourse to law, or are taken to the village
court. Since the Papago are a law-abiding people, not many cases come up for
681 trial. In one year only 116 were on record, the majority cases of drunkenness.
674 The usual sentence is a number of days in jail. The normal Papago does not
like such a sentence, for he does not like to have "people talk," as they do
when someone is behind bars. Thus the diffuse sanctions of public opinion are
important in maintaining the legal sanctions.

693 Indian judges and police are not in a particularly happy position. Several past incumbents criticized for favoring kinsmen or people of their own religious denomination resigned. At the time of this study, one of the judges nominally a Presbyterian apparently was not accused of partiality.

DISTRICT COUNCILS AND COURTS

631 According to the tribal constitution, the district is the basic unit of govern-
634 ment, with an elected council and a court. Actually, however, as indicated in
preceding sections, this white pattern of government has not really taken root
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[9] Or, in the absence of such a code, according to a code of laws for Indians embodied in U.S. Code, Title 25.

[10] Approved 1945.

631 634 657 on the Reservation. The districts were created to facilitate range management, and, while in the main they coincided roughly with the areas occupied by the various dialect groups, the boundaries cut across old lines of communication and usage. Nor are these boundaries mere symbols, for they are marked by fences erected to prevent the cattle of one district from straying into another and eating up its range. Some fences cut through established ranges and kept cattle from their usual watering places. An added annoyance was that they cut across some old routes from one village to another. The fences have now stood so long that the people have adjusted to them, but the districts which they mark off have never become real entities.

634 At the time of the present study the council of Baboquivari District in the southeast consisted of ten members, with one or two representatives from each village except Topawa, which had four in accordance with its size. Supposedly these representatives were elected at village meetings every two years. The council formerly had met every month on the Friday preceding the tribal council meeting, and anyone interested might come and participate in the discussion. However, interest had apparently fallen off, for no meetings had been held recently.

Hickiwan and Gu Vo district councils were organized on the old pattern: every adult male was eligible to speak and to vote. However, as previously noted, Hickiwan had been so badly split that no united action was ever taken, and only one meeting was held in the two years preceding this study. Gu Vo had had no meetings at all.

At one time consideration was given to the establishment of district courts where small matters could be decided. The people of Baboquivari indicated a desire to try out such a court, but it was never set up. Here, as elsewhere on [627] the Reservation, minor disputes which cannot be settled by the family are still taken to the old village court.

THE PAPAGO AND THE LARGER WHITE WORLD

466 Papago who go to work off the Reservation—as they have done in increasing numbers since 1940—receive varying treatment. Where they work in large numbers, as on the ranches and at the Ajo mine, they are given a good deal of consideration, for they are known as good and steady, though slow, workers. Ranchers allow their workmen to go home occasionally and treat them according to their merits as honest and hard-working individuals. Papago who have gone out to work for several years usually return to the same employer, and quite friendly relations are often established between them.

Contacts with employers at the mine are, of course, far less personal, but

466 mine officials have gone to some trouble to provide satisfactory living conditions for Papago employees and their families. For them they have built neat small houses with sanitary facilities. Since they are fair with their employees, they expect good steady work in return. In an effort to combat absenteeism (particularly from drunkenness), mine officials encouraged the organization of Ajo Papago with a council and a "chief," after the fashion of their home villages. A representative was to attend, but not to vote in, the tribal council meetings. This is a particularly interesting development, since families from all parts of the Reservation now live in Ajo, and it may contribute to the growth of tribal unity.

[461] Working on a definite schedule in the white fashion is not a normal life for the Papago, but he seems to be able to adjust, perhaps because he likes the wages, which give him a higher cash income than most people can earn on the Reservation. The wages may compensate for the poor living conditions that in some cities go with jobs for Papago.

641 The general public looks upon these Indians as a lower-class group with a tendency toward drunkenness, and, though they are not subjected to as marked social discrimination as are Negroes,[11] they must endure a certain amount of racial prejudice.

Political discrimination is more apparent. Papago must pay the state automobile tax and income tax and, when they are off the Reservation, the state sales taxes as well. But they do not have the right to vote.[12]

641 186 Since 1924 all Indians born in the United States have been citizens. As such, the Papago are subject to all federal laws and regulations. A few men pay federal income tax, but Selective Service and rationing affected all. The Papago submitted to these wartime necessities with better grace than many groups; despite the difficulties of language and transportation, surprisingly large numbers turned out to register for the draft and for rationing. Rationing was of course difficult for the Papago at first, but after they understood it there were few complaints, and they seldom forgot to bring ration books to the stores. Papago adapted themselves to wartime conditions with the ease and lack of strain which has characterized them throughout their history. One leader in the western districts instructed young men not to register for the draft, but, when he was sentenced to prison for attacking a federal officer, resistance died down. At the time of this study about 1,700 Papago were regis-

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[11] It is interesting to note that the Papago in turn have borrowed the prevailing white concepts about Negroes. They regard "The Black Ones" as social inferiors, comic characters who are fit subjects for clowns to imitate.

[12] On July 15, 1948, the Arizona Supreme Court handed down a decision that Indians in the state would henceforth be entitled to vote.

tered and 155 were in the armed forces, including 40 volunteers, two of them in the WAC. The tribe also supported the war effort financially; by 1943 the council had invested $10,000 in war bonds, the Papago oversubscribed their quota in the Fourth War Loan by $25,000 and topped their Red Cross quota by $600. 641 186

Some of the Papago are conscious of the fact that, though they bear many of the responsibilities of citizenship, they do not have all its privileges. They know that they are the only group in the United States which does not own the rights to minerals under its lands (see chap. iii), and the small number who pay state and federal income taxes resent their inability to vote.[13] It would be interesting to know whether the Papago who have been in the armed forces feel they have risked their lives for a country in which they might be called "second-class citizens." On the whole, and particularly since their participation in the war effort, the Papago are learning what it is to be citizens of the United States. Many of their leaders feel that the day is not far off when they should have the franchise and take an active part in the life of the nation. On July 15, 1948, the Supreme Court of Arizona unanimously overruled a previous contrary opinion, which had been handed down twenty years before, and held that Indians living on a reservation might vote if they fulfil the literacy qualifications required of other citizens. 641

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[13] Indians constitute 12 per cent of the population of the state of Arizona. If they should gain the franchise, they might form a strong bloc, but the ethnocentricity of each tribe is such that it would doubtless work against united political action.

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Part II

GROWING UP ON THE DESERT

By JANE CHESKY

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Chapter VIII

THE FIRST FOUR YEARS

000 IN THE first of this book we have seen the Papago working and living together in the desert. We know something of their way of life and the changes brought to it by contacts with white culture, a little about the Papago outlook on life, and some of the chief personality traits of this Indian group.

128 Now we want to see the Papago as he grows up to be one of the Desert People. This part of the study is a biography, a composite picture of Papago childhood. It is a record of the experiences common to most Papago children, derived from the histories of many of the children studied in both the eastern and the western parts of the Reservation and from the observed behavior of Papago of all ages.

178 561 This life-story is divided into stages marked by significant changes in the child's behavior toward other persons. These stages correspond roughly to the following age groups: the first four years of life; later childhood (five to ten years); and adolescence (from about eleven to eighteen).

These divisions cannot, however, be taken too literally for a number of reasons. For one, during the transition between phases (for example, four to six years and ten to twelve years) the child's behavior is least clearly defined—not necessarily in the case of the individual child but in regard to Papago children as a whole. Also, the Papago are completely unconcerned with chronology. Though there are baptismal records for most children (except in the extreme West) and a small number of birth certificates, even in Baboquivari District few parents have kept personal records or know their children's birthdays. In the western districts most people simply have been assigned birthdays by the census-taker, and they are unaware of even these hypothetical dates. The significant fact for our purposes is that parents are not interested in and have no knowledge of the dates at which their children achieved certain skills, such as walking and talking.

856 561 Moreover, the Papago have no formalized age grouping. The only rites

561 856 that define passage from one stage to another—the birth ceremony and the girl's puberty rite—are private occasions which do not serve as announcements but merely as insurance of the well-being of the individual and his family. The terms the Papago use show their indifference to time concepts: the tiny infant is called "just born"; "child," "boy," or "girl" are used from infancy to adolescence, and "girl youth" or "boy youth" between puberty and marriage. In other words, between early infancy and marriage the Papago recognize only two stages: before and after pubescence. However, there is no more radical change in behavior patterns at pubescence than at any other time.

856 861 This distinction illustrates very well the usual child development pattern of the Papago; training is informal and leisurely, attuned to the child's natural pace and accomplished with little conscious planning. The process is continuous, with few absolute landmarks; one phase blends into and overlaps those preceding and following it. Small wonder that the Papago use biological manifestations to mark the changes.

128 Since this study is written for readers who are accustomed to the white pattern of clear age groups and because such classification facilitates comparison with child development elsewhere, the 0–4, 5–10, and 11–18 age groups will be used here. We now turn to the first phase.

BEFORE THE BABY IS BORN

163 Papago children are more widely spaced than among some Indian tribes and white groups of similar economic status. There are a few families in which a child is born every year, but, judging from census records, in most families births occur from eighteen to thirty months apart.[1] Considering the death rate among Papago children, the average is near the lower end of this range. Most of the women seem to prefer not having a child every year because they feel that they cannot adequately care for so many children and will be likely to [842] [846] lose them. But, as noted in chapter iv, apparently most women take no contraceptive measures, and the taboo on intercourse for a month after childbirth no longer prevails.

843 Life goes on much as usual for the expectant mother, and there appears to be little illness in connection with pregnancy. No special considerations are shown her, and the pregnant woman performs all her usual tasks, lest she have a difficult birth. On the other hand, she is not segregated or given extra duties.

Some taboos are still in force for prospective parents. They must stay away from animals that make children sick, and they must not touch animal blood. The father avoids killing rattlesnakes and rabbits, but most men no longer refrain from butchering cattle or going hunting, as they did in the old days. 843 The mother observes certain other taboos: she must not allow dogs to breathe upon her; she must not look directly at the sun; and, according to one informant, she must not stare at or mock a cripple, lest the child be similarly afflicted.[2] Today most parents apparently are not too concerned about these dangers, but if an illness of the child is attributed by the medicine man to some infraction of these rules, the parents readily accept the interpretation. One young father blamed his little son's illness on the fact that, during his wife's pregnancy, he had helped white men test the blood of horses.

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[1] This statement is qualified by the unconcern with chronology noted above.

The whole household looks forward with joy to the coming of another baby, 842 for children increase the status of the parents, insure the future solidarity and prosperity of the household, and secure the elders against the privations of helpless old age. Although the male is dominant in this Indian group, not much preference is shown for boys; children of either sex are welcomed and treated with equal care. The Papago are aware, however, that one capable woman can manage a large household but that one man cannot handle a farm and herd. Hence the loss of a male child is felt more keenly, as is apparent in such phrases as "and it was a boy too!" There is no evidence that twins are considered [845] undesirable or that one of them is put out of the way. Several sets of living twins are known to the writer, and people speak readily of the death of one of a pair of twins.[3]

BIRTH

The great majority of Papago are born at home. In the western districts, the 844 distance to the Reservation hospital at Sells (sixty-five to one hundred miles), bad roads, and general distrust of white medicine keep most women from going to the hospital. Even the inhabitants of the eastern districts, who are closer to the hospital, do not seem to relish the thought of their babies being delivered by a white man.[4]

In childbirth at home the mother is attended by her own mother if possible; otherwise by her husband's mother or any adult female of the household. The woman in labor kneels and grips a post or is supported by the attendants. If

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[2] Ruth Underhill, *The Social Organization of the Papago Indians*, p. 156.

[3] There is some indication that, if one twin must die, it should preferably be the last-born. [789] A medicine man carves wooden figurines about seven inches high which represent the twins. One figurine is buried with the dead child and the other is kept in the house with the living twin. Each is thus thought to be unaware that his twin is not with him; neither will become lonely for the other and attempt reunion. In the old days, according to Underhill (*ibid.*, p. 158), twins were considered to have magic power.

[4] Between 1940 and 1943 three Hickiwan women who had learned English at school went to the hospital, but two did not go until after difficult deliveries at home. In the East, hospital deliveries are more frequent, but they are still only a small fraction of the total.

844 delivery is difficult, a medicine man is called in; he massages the abdomen in an effort to right the child in the womb.

After the delivery the attendants cut the cord and bathe and swaddle the baby in blankets. One of the men of the household buries the afterbirth in a deep hole outside the house.

846 After the birth the mother is not secluded in the menstrual hut as she was in the old days. She rests in bed from four to twelve days, or until she feels strong enough to resume her duties. Her first food following the birth should be a soup of roasted wheat and saguaro seeds. Until the baby has been taken to the medicine man, the mother is to eat no salt and nothing "sweet" or "sour." How strictly these rules are observed today is not known.

BIRTH CEREMONIES

852 Within three or four weeks after the infant's birth, his parents take him to a medicine man for the purification rite. At dawn of the date set by the shaman, which seems to depend on the phases of the moon, he draws a circle on the ground in which he seats mother and baby, and sometimes the father. They face east, as does the medicine man standing in front of them. The first part of his magic ritual is directed toward the rising sun. Then he turns, waves his sacred eagle feathers over the family, and gives each of them a mixture of magic white clay and water to drink. When the medicine man has given the baby a name (see chap. iv), the ceremony is concluded.

This is a simple rite and involves no elaborate preparation. As it is performed in private, only the child, the parents, and the medicine man being present, the villagers are probably unaware of the event at the time. However, it is extremely important that the rite be performed, and it is rarely omitted except by the strictest Presbyterian Papago. By this means the uncleanliness of baby and parents attendant upon birth is removed, and the health of the child and of all his relatives is safeguarded. The child who undergoes the rite will be industrious as well as strong. Even an unmarried mother, against whom feeling was rather bitter in the village because she was carrying on an affair with a married man, brought her baby to the medicine man. The father did not accompany her, but apparently the ceremony was regarded efficacious without him. However, some Papago are beginning to question the validity of the ceremony. One woman told an investigator that the Presbyterian children who had not been taken to the medicine man apparently grew up quite normal and healthy, but she then pointed to some sick children and remarked that "people said" they were not strong because their parents omitted the rite!

Since most Papago profess some Christian faith, the native birth ceremony

is ordinarily followed—usually after some months—by baptism. Up to this 852
time the child is called simply "baby," for the name bestowed by the medicine [551]
man is never used as a term of address.

Sonora Catholic godparents sprinkle the child with holy water, say Spanish prayers over him, and give him a Christian name, which may have been selected long since by the parents but is formally recognized as a gift of the godparents. They give the baby a new set of clothing and feed the relatives and friends who have gathered at the church. In return the parents present them with a basket of native manufacture. Most baptisms in the West are like this.

The procedure in a Roman Catholic baptism is similar, except that the priest performs the orthodox ceremony, and the godparents must have been baptized and (if spouses) married in the church. As noted in chapter vi, however, the Roman Catholic child may have two sets of godparents, and in this case the Sonorans will also baptize the child. Presbyterians follow the usual baptismal rites of their church.

INFANCY

The keynote of a Papago infant's training is indulgence. The Desert People 854 believe that a little child should be happy at all times, and it is his mother's responsibility to keep him so. The attitude of other adults in the home is also compliant. Until the next child is born, the baby is king, and his wish is law. Various kinds of training begin after his second birthday, but weaning and denials are so handled that the child feels as little restraint as possible.

The baby goes wherever his mother does—to the neighbor's, to town, or to a fiesta. He is rarely out of her sight and never out of her hearing; he lies in a bed or in a hammock in the house or under the ramada, wherever his mother happens to be working. The hammock is merely a blanket folded over two ropes swung from the walls or posts; it has no stiff framework and thus is soft and comfortable. Usually the ropes are slung so low that the baby can see all that goes on around him, but the hammock is deep enough to be secure, and the child is tied in, with his arms left free. His mother or some other relative keeps him swinging gently. When the mother takes him away from home, she lays him diagonally on a little blanket and folds the corners loosely over his body and face. In cold weather he is often first rolled tightly in another blanket. Being wrapped up seems to give security to the infant and usually quiets a restless child.

A baby is in his mother's arms whenever she is not occupied with some household task. A busy mother who has no one to help her may carry her baby around on her hip while she does her work. When he is lying down, his slight-

[Text continues on p. 121. - Analyst]

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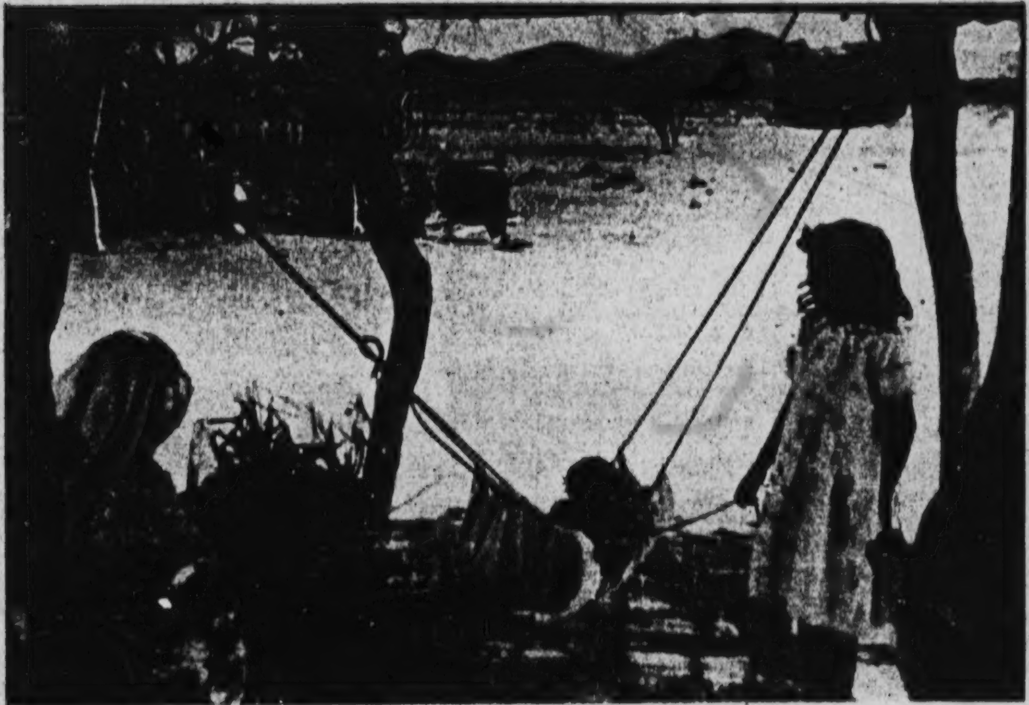
PLATE XII



Rosamond B. Spicer

UNDER THE RAMADA

Sister swings baby in his hammock while the mother works. Olla at right holds drinking water for the family

est whimper brings her to him immediately, to talk to him or pick him up. 854
Often she will place him on his back across her knees and pat his chest with a
slow regular beat, letting her lower arm fall as a dead weight on him. The
stroke is heavy enough to expel the air from his lungs, but he seems to like it.
If he persists in crying when she or someone else attends him, the mother even-
tually quiets him by nursing.

Papago babies are nursed whenever they cry from hunger or when they can be quieted in no other way. Feeding is irregular; the child is usually nursed before bedtime (but this hour varies from day to day), and ordinarily once during the night, oftener if he awakens. Breast feeding is the almost invariable rule.[5] 853

If he is awake at the family mealtime, the infant sits on his mother's lap at 853
the table. At about six months, when he begins to notice the food in the dishes
and perhaps fuss for it, his mother will feed him broth or juices of the food 862
on the table, or perhaps coffee, offering it to him with a spoon. Later he is
given bits of mashed beans or potatoes by spoon, and little pieces of tortilla or
a section of an orange to chew. At fourteen or sixteen months he is still nurs-
ing, but he is also taking regularly most of the solid foods served to the family.

Though still sitting on his mother's lap, the baby begins holding his own spoon at about two years. If he fails to satisfy his hunger, the mother feeds him more when her meal is finished. Since highchairs are not used, the child sits alone only when he is big enough to reach the table from an ordinary bench.

THE YOUNG CHILD'S DEVELOPMENT

From the time he is born until he begins walking, the Papago baby spends 854
almost all his time in his hammock, on a bed, or in someone's arms. Conse- 856
quently, he has little freedom for experimenting with the use of his legs. Some
babies crawl on hands and knees, and others begin to walk on all fours with
legs straightened. Usually, the baby learns to stand by pulling himself up on
boxes or furniture and begins to walk after going through a short crawling
stage.

Apparently this occurs between fourteen and twenty-two months, but this 856
is only a rough estimate. Many mothers say, "He walked at about the right
time"; but this means little because their judgment is based on the child's
size and strength rather than on age. Most mothers say that they do not try
to teach their children to walk, that the babies "just do it." It is true that there
is no urgent or even systematic coaxing, but many mothers amuse themselves

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[5] The investigator heard of only two instances of bottle feeding in Hickiwan District, both for supplementary feeding, and one of these was at the suggestion of the white teacher.

856 by getting the child to take a few steps, and every mother is delighted when her baby starts walking. She beams with pride when she can get the baby to demonstrate the new accomplishment and rewards him with smiles, caresses, and loving words. On the other hand, not much concern is shown if a child seems to be slow in walking, and he is not shamed by his relatives.

Similarly, when he learns to talk is largely determined by the child's own development. The mother usually denies teaching the baby and says that he learned by imitation, though she may coax him by saying a few words and reward him with caresses if he succeeds in imitating her. Children begin efforts at speech at about twenty-two months; by two and a half years they are able to make most of their wants known verbally.

195 All Papago use baby talk in addressing a child until he is about five. There-
854 after he is supposed to enunciate clearly and is embarrassed when adults tease him by addressing him in baby language.

863 Cleanliness training is delayed until the child can walk and understand instruction. The infant wears diapers most of the time, and children up to about two and a half years always wear them in public. However, at home the older baby is frequently dressed only in a shirt. Urination in the yard, or even on the dirt floor of the house, is considered no misdemeanor in one so young. When he is about twenty months old, or earlier if he can walk easily, the mother begins taking him into the bushes away from the house and telling him to urinate there. His older brothers and sisters are instructed to take him with them when they go to the bushes, and he learns largely by imitation. He soon becomes aware of the extreme modesty of his relatives during elimination, and by the time he is three and a half or four years old he knows that he is supposed to go to the bushes with members of his own sex.

Mothers say that they do not have much difficulty with cleanliness training. By the time it is begun, the child is old enough to understand directions and to want to imitate his older playmates, and so he learns quickly. That he is perhaps three years old at the time is no cause for concern from the Papago point of view. If the child soils himself or his clothes after this time, his mother will make a face and utter a disagreeable sound, saying "dirty" or "nasty." She tells him that he is dirty and that he must not do that here, and sometimes she warns him that the animals or ghosts will get him.

863 The white woman trader in the West reports that she has seen mothers try
177 to make children of two and a half or three clean up their feces after they had an accident in the store. The women would scold and threaten all the time and then thoroughly wash the children under an outdoor faucet. Since this treatment was not observed in the home, and no mother mentioned having used

863 177 it, the method may have been adopted for the occasion because the mothers know the fussiness of whites in such matters.

862 Weaning comes later for the Papago than for most white children. Unaware of her child's exact age at the time, the mother who is questioned about it is likely to laugh and say with a little embarrassment, "He was pretty big." Several instances were found in which the youngest child of a family nursed four or five years, but the older children were weaned at from eighteen to thirty months. A few mothers begin weaning at about a year, but they are a small minority; ordinarily the mother continues nursing well into the next pregnancy.

Several weaning methods are used. A few mothers in Baboquivari District said that they simply stopped nursing their babies and let them cry for four to fourteen days until they forgot, but elsewhere on the Reservation this was not the practice.

Mothers usually say they "just stop" nursing and that they have no particular difficulty. When a child begins fussing to nurse, the mother does not deny him straightforwardly but puts forth great effort to draw his attention elsewhere. She cajoles him into playing with his siblings or shows him a man coming on horseback or dogs fighting in the yard. Sometimes she is successful in diverting him, and, after several similar instances, the child does "just stop."

If a mother cannot wean a child by this process, she has two alternatives. She may leave the child with his grandmother for a time. If the grandmother lives in the same house, the mother goes away; if not, the child is taken to the grandmother. The weaning is not accomplished at one fell swoop; the baby is left for only a couple of hours at first and eventually overnight. His relationship with a grandmother is always cordial and going to see her is a pleasure, [603] hence this weaning method, like the preceding one, is a relatively painless one. The child seldom gives any trouble for a grandmother; he seems to forget all about nursing unless reminded by the sight of his mother.

A few women, usually those who have no mother or mother-in-law at hand to help, put chili on their breasts to discourage the nursers; one application is usually sufficient.

866 854 Weaning means that the child begins to sleep apart from his mother, for she no longer needs to nurse him during the night. In the eastern districts a crib may be provided for the baby, but the general custom on the Reservation is for the weaned child to sleep with one or more of his brothers and sisters in the same room with the parents. If there is no room in the bed with the older children, the baby may sleep with either grandparent or almost any other

854 866 relative. There is no consistent pattern for this, and he does not necessarily sleep with the same person every night. Only in rare instances are the two sexes separated for sleeping until children are nine or ten years old.

869 In addition to learning motor skills and being weaned, which are common to children everywhere, the young Papago child is taught another important lesson; he must not play with or handle wild animals. Since the Papago believe that nearly all animals can cause disease and that some are especially dangerous to children (see chap. vi), as soon as a child begins to walk around the yard he must learn to keep away from wild animals. He is warned away from a gopher mound and is not allowed to handle rabbits shot for food. These warnings are immediately effective and have a powerful influence on the child. He is imbued with a great and lasting fear of animals and of the sickness they bring (see chap. xiv).

PATTERNS OF CHILD-TRAINING

861 855 General patterns of child-training among the Papago are based on the belief that a little child should be happy and therefore he should be humored as often as possible. His development should suit his own pace, and he should not be forced or even strongly urged to follow the wishes of older persons.

The attitude of adults toward little children is permissive, and they are not rebuked for interfering with the work or conversation of their elders.[6]

Children are allowed to play with almost anything they please except animals. Teaching care of property is not a problem, for there are few things in the Papago home which the child can damage. Anything which the baby should not handle is put out of sight. If he does cry for some forbidden object, his mother will try to interest him in a substitute; if he wants a china dish, he is given an unbreakable pan. Should he persist in crying for the dish, the mother will express her displeasure verbally, "Oh, Juan, don't cry! Why do you do that?" and at the same time renew her efforts to distract his attention. If all efforts fail, she will give him the desired object and watch him carefully as he plays with it. When one mother was showing the writer a valued clay figurine used in treating illness, her two-year-old son howled for it. Finally, she gave it to him, but she held him on her lap, keeping her hands on or near the doll, and directing his attention elsewhere as soon as possible. A valued object in the home of a relative or friend would be treated in the same way.

861 In situations where the child must be denied, efforts are made to keep him

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[6] Underhill (*op. cit.*, p. 159) tells of an occasion when she was taking texts and was seriously inconvenienced by two children who romped through the room and drowned out the informant's words. When she asked the interpreter if the children could not be told to keep quiet, he replied, "I don't think so. They are his grandchildren."

861 from realizing that he is being refused. His mother will hide candy and tell him that it is all gone. When he is being weaned, he is not told, "No, you can't nurse any more" but rather, "Look, see brother riding the horse!" or "Let's go see Grandma."

Other than diversion and mild deception, the only sanctions invoked are supernatural forces or some non-Papago enemy. The child is told that he must not play with animals because they will make him sick or they might be ghosts. A mother who was visiting the writer tried to divert her child's interest from a Yaqui dance mask with which he wished to play. When these attempts failed, she said in a tone of fear, "You must not touch it. It is a ghost!" The boy turned away from the mask at once and did not glance toward it again the whole evening. After a hard tumble, his mother told him if he did not stop crying the Japs would come and get him.[7] The child became quiet immediately. It is significant that, in using threats of the supernatural or the enemy, the mother sidesteps responsibility for the denial; it is not she who refuses the baby but an outside agency potentially harmful to them both.

Corporal punishment of any sort is seldom used on Papago children under five. Slapping is not employed, but families with training in white ways sometimes spank their babies; it is more frequent in the more acculturated eastern districts. One widowed mother who worked at a post silenced her howling three-year-old by plunging her into a bucket of cold water and scrubbing her roughly from head to foot, scolding all the time, "I guess you are too hot, too hot in the head. Maybe this will cool you off!" Probably if the child had been at home, she would have received at most a scolding.

THE BABY AND HIS FAMILY

593 854 At least until the time of weaning, his mother is the child's chief source of pleasure and blame. As long as he is a "child" (i.e., under twelve years), he is fundamentally her charge and her responsibility. After weaning, the child is not so constantly with his mother as before, but she is usually near by to help or console him. The importance of the mother-child relationship is very clear to the Papago, as they frequently indicate: members of a family who are approached for interviews about a child will say, "You will have to talk to his mother"; when a baby cries at a fiesta, the bystanders ask, "Where is his mother?"

Although the mother-child relationship is of greatest importance to the

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[7] Among the Sioux, crying babies are sometimes hushed by being told that a white person will get them (see Gordon Macgregor, *Warriors without Weapons*, p. 128). In the incident just described, the presence of a white person prevented such a threat, if the mother had been in the habit of using it.

593 854 young child, he has contacts with other family members from the day of his birth. Regardless of the identities or ages of the persons involved, their relationships with the baby are governed by the same principles as the mother's: a child should be happy; he should have what he wants. Their methods of dealing with the child are essentially the same as the mother's, and the degree to which they employ these methods depends on the intimacy of their associations with the child and their kin ties with him.

603 854 It is the grandmother who comes closest to the mother relationship with the child. Ideally this is the paternal grandmother who belongs to the household or lives near by; however, with changes in the old pattern of patrilocal residence, the grandmother of the household may be the mother's mother. In either case, she is a second mother to the baby. She probably assisted at his birth and is intimately associated with him throughout his babyhood. A familiar scene in Papago life is that of the mother and younger women of the household working under the ramada, while the grandmother, relieved of active duty, sits near by swinging the infant in his hammock or holding him in her arms. He soon learns that it is she who is nearly always free to answer his cries and that she is more patient and anxious to please him than the younger women or his brothers and sisters. Hence the child will go to his grandmother as readily as to his mother, often more so. Until he is weaned, the baby is never left by his mother with anyone but the grandmother.

Because of the grandmother's role as substitute mother, the child does not resent being left with her during weaning and always seems glad to go to her. After weaning he frequently stays with her when his mother wants to dance at a fiesta or work away from the house. The old lady expects to share the care of her grandchild and expresses her joy in having him with her by smiles, loving words, and caresses.

To the child the grandmother is, first of all, a gratifier and a champion. As he grows a little older, he sees her authority over all the other children and the adult women of the household as well. Her supervisory position does not affect him much as a very young child, but his early awareness of this role helps to teach him the patterns of authority in the household. Perhaps it also smooths the path of his entrance into the next age group, when he also will be subjected to her direction with somewhat less indulgence.

Grandfather, too, is a source of pleasure to the baby. If he is still active in the fields, the child will not see so much of him as of the grandmother, but the old man will always play with him after the day's work. If the grandfather is too old to do heavy work, he will probably spend many pleasant hours watching his grandchild. Then, or in the evening, when the family gathers, the small one

603 854 may hear from grandfather some of the old Papago songs or stories and lectures on the virtues of industry and honesty. The baby soon learns that grandfather has authority over everyone in the household, even the baby's own parents. By the time he is old enough to run errands, he will show to his grandfather the respect and obedience due to the head of the house.

593 854 It should not be assumed from the emphasis on the mother's and grandparents' relationships to the baby that the father is merely a figure in the background. A man shares very little in his offspring's training in the first four years, for he must be away from the house most of the day. When he is at home, the father may watch the baby for short periods if all the women are busy, but if the child needs special attention, the women take over. Away from home, though the small Papago is primarily his mother's charge, the father is perfectly willing to help; in town or at the fiesta, if the mother has other cares at the moment, the baby is not infrequently seen in his father's arms.

A father shares the pleasure of all the Papago in having children and is free to express it. Tots reciprocate their father's love, and many show great joy when he comes home in the evening to play with them. The baby also early becomes aware of the father as the family protector. The child and his mother rarely leave the village unless the father accompanies them. A mother sometimes quiets her child by warning him of supernatural dangers that may come while the father is away and unable to care for them; the child knows that it is his father who talks to strangers and drives away coyotes that prowl too near the house. At night the little one knows the intimate physical protection of both parents, for he sleeps between them.

857 854 Frequently the little child is assigned to the care of a sister or girl cousin of from eight to eighteen. (If there is no girl in this age range, a smaller girl or even a boy acts as a guardian, and boys seem to attach no stigma of effeminacy to the task.) The guardian shortly comes to perform for the baby almost every service that the mother does except nursing, and if she is left in complete charge, as she occasionally is, the girl will direct and correct the baby exactly as his mother would. The relationship between the guardian child and the baby is an intimate one; if the guardian is not much older, she may show impatience with her charge, but the two usually get on well.

602 854 Other members of the household may be adult aunts, uncles, or cousins of various degrees. With the women the baby's relations will not be very close until after he is weaned. These women will tend him when mother or grandmother is otherwise occupied and will indulge or correct him as she does. After the baby walks and joins a play group of his siblings or cousins, the

602 women will have more supervision over him, particularly if the mother has
854 another child. The men are friendly with the little child but never intimate.

From the beginning the child is strongly aware that these people are relatives. He is taught to use the proper kinship terms and slowly comes to see the lines of authority in the household.

854 The Papago baby's contacts with other children begin early if he is not the
851 first child in the household. Small children are occasionally called on to watch
the baby or swing him in his cradle. Otherwise youngsters ignore him, but now and then they evince a lively interest in him for a few minutes. They want to handle him and perhaps even to tease him, evidently out of curiosity to see what the baby will do rather than out of malice. The older boys of the household have almost nothing to do with the baby.

When a child begins to walk, he is likely to be intrusted to a play group of children from three to eight years of age, who will see that he does not wander away or hurt himself. The group will probably be of girls, as boys range too far from the house to watch over the baby.

Because the children in the play group to which the toddler is attached are older, they are in a position to exercise authority over the baby, and, thoroughly aware of this, they may try to dictate to the smaller one. If they can persuade him, it is legitimate for them to do so, but, if the baby does not wish to comply, he has only to raise his voice in protest; an adult will intervene at once to remind the children that the baby must be pleased.

OUTSIDE THE HOUSEHOLD

854 Within a few weeks or even days of his birth, a Papago child will see most
574 of the people of his village, the majority of whom are probably related to him.
Interhousehold visiting is not typical of the Papago, but in the course of cooperative work, of gift exchange, and of transmitting news families have rather frequent contacts. The child will also come in contact with the medicine man at birth and curing rites and with people from other villages at fiestas.

755 The relationship of the child with the medicine men and singers is not un-
854 pleasant. The birth ceremony previously described is simple and contains
nothing frightening. The child will probably meet the medicine man next when he or some member of the family is ill. The sick child has nothing to fear from the medicine man, for the shaman never hurts a baby. He may rub or pat his body and suck at his flesh; he will surely blow smoke over him; he may sing and wave eagle feathers over him. Always he urges the little one to sleep and rest. If curing singers are called in, they speak kindly to the sick child and tell him they hope their songs will make him well. The songs prob-

ably have a relaxing quality, and the baby may be soothed by the monotony of 755
the rattles. The loving attention of his mother or father always by his side, the 854
friendly or even gay talk of all adults present, and the painless treatment of the shaman produce an atmosphere of reassurance. Children are never afraid to go to the medicine man.

Having a small baby seldom keeps a Papago mother at home. She bundles 854
her baby up and takes him with her to every fiesta, where she sits on the sidelines, chats with other young mothers, and watches the dancers. Possibly she takes the child to the home of friends in the village. At night the mother carries him into the church; while she sits on the floor and joins the other women in singing and praying, the baby, rolled in a blanket, lies on the floor beside other sleeping children.

By the time he is two and a half years old, the Papago child loves the color 857
and excitement of the fiesta, where he meets and plays with his small cousins from other villages. He is allowed to run around the dance ground under the watchful eye of his mother, grandmother, or aunt, and one of his sisters may dance with him or teach him to dance with another small child of the opposite sex.

During the fiesta the small child learns of a new danger. He finds that men, 867
perhaps his father and uncles, at times, behave strangely. His female relatives snatch him out of the way and whisper, "Drunk!" in the same tone they use to warn him of ghosts. He learns to run away when drunks lurch near him and to ignore them completely when they accost him; sometimes he witnesses brawls or other violence. By the time he is five, he has probably developed a strong fear of drunkenness, but he views it as something to be expected at a fiesta. He is unconcerned with it as a moral issue. That concern, as discussed in Part III of this study, will come later.

Chapter IX

THE CHILD FROM FIVE TO TEN

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WHEN he is about to enter the second period of childhood, from five through ten years—or earlier if a new baby has already arrived—the child is exposed to a second guiding principle in Papago relationships: authority is rightfully in the hands of those who claim age seniority. This is not a formality that begins or ends with the rule of a few ancient persons. It is an active everyday principle that applies to Papago of all ages after babyhood, even in the most casual relationships.

The very young child is not much concerned with seniority, for in his case it is outweighed by indulgence. (He may, of course, have noticed the authority of adults over children older than himself.) But, when he reaches the age of five, he becomes a working part of the system wherein the supervisory role is determined by relative age; adults and older children have authority over him; he in turn has authority over his juniors.

Yet his control is not complete, for the principle of indulgence comes into play, and the younger child must be gratified before himself; jurisdiction over his juniors is limited by his ability to make it pleasurable to them. He must learn to be benefactor, where previously he was only beneficiary.

The role of benefactor is not invariably a happy one, and sooner or later the child tries to force his will upon his junior. The little one demands adult intervention and gets it. Then the older child finds himself in the middle of a conflict involving three persons. He learns that the adult will indulge the younger child at his expense and that rebuke comes swiftly indeed if he is suspected of misusing the power of his seniority.

Thus when still very young the Papago child learns two simple rules of behavior which will guide him throughout life: authority goes with age; authority must not be abused.

It should not be thought, however, that the child is constantly being frustrated. True, babies must be indulged, even at his expense. But the five-to-ten-

year-old can also claim indulgence as a young child, and, though older children 867
and adults have control over him, they are obliged to please him so far as is 561
compatible with the general welfare of the household.

Use here of the words "rule" and "principle" in describing authority among 867
the Papago does not imply a rigid set of laws which the child must learn as he learns that two and two make four; the child is not taught proper behavior by having authority explained to him. He is occasionally reminded that a baby must always be satisfied and that children must always mind their elders, but the child learns chiefly by observation and imitation how to make his control over younger children palatable and how to appeal to adults when older children frustrate him.

Certain ideals of Papago behavior are, however, made explicit for the benefit 867
of children. In the evening when the family is gathered together, the grand-
father or other adult speaks often and at length on the virtues of industry, 577
honesty, and kindness. In this desert land, where everyone must work together in order to live, an important part of child-training is the emphasis on working hard and on getting along well with other people. Boys and girls are constantly warned to avoid squabbles, and quarreling children are separated and roundly scolded. Adults say, "We tell them to be kind to people and not to quarrel." To the Papago kindness appears to mean the antithesis of quarrelsomeness. It is tolerance, good nature, and respect for other people's rights rather than active benevolence. To instil these desirable qualities, the elders moralize at length, for extensive oral argument is a recognized and conscious method of child-training in this age period and the next.

LEARNING TO BE WORKERS

Most Papago children begin to share in the work of the family about the 868
time they enter the five-to-ten age group. As noted in the previous chapter, a young girl's play group may be charged with care of the baby while his mother is busy with other tasks. A little girl may be sent to fetch things needed from the house or storeroom for the women working under the ramada. She may bring water from the *charco* or pump and wood from the woodpile, and at this time she learns a few housekeeping chores—sweeping, rolling up bedding for the day, washing dishes, setting the table. An unusually capable girl may begin to assist with cooking or laundry by the time she is ten.

Boys in this age group are much more free to do as they please, particularly if they have sisters to help with the household chores. They seldom help with the smaller children unless no female is available, and, though they run errands, fetch water, and chop wood, little else is asked of them. Loitering about the

868 fields during planting or harvest, they doubtless learn something of agricultural procedures. However, a few boys who are exceptionally large and strong have a regular share of the farm work by the time they are ten.

The precise age at which a boy or girl begins to assume regular duties varies according to his own inclination and the family situation. The Papago believe that, just as the baby learns to walk and talk when he is ready, the older child will learn to work and need not be mercilessly prodded. Some families who feel that their children should become industrious at an early age carry on the training more intensively. Others are impelled to do so by the need for additional help in a short-handed household.

861 Characteristically, Papago children learn mainly by imitation, without explanation by adults and without asking many questions. As mentioned in chapter i, direct question and answer is not the Papago way of acquiring or giving information; hence the Papago child is not encouraged to ask how to do things. For example, in learning to cook, the little girl tries to do what she has seen her mother doing. Adults give little, if any, assistance to the novice, but they watch her closely and make it clear that they are pleased if she succeeds. Direct praise, however, is seldom given.

Though the Papago do not tell the child *how* to do things, they explain at length *why* he should do them. 885 They impress upon him that only by willing obedience can he become an honest, industrious, and kind man—the sort of person who is respected in Papago society. To get a child to do as they wish, parents say that they "just talk to him, and he does it." If he fails to comply, they lecture him further, tell him people will think he is lazy, or "talk hard" (scold). Beyond this, most parents say that they "do nothing." One mother expressed some irritation by saying, "What can I do? He runs away in the brush!" Such behavior provokes adults to momentary exasperation, but continued evasion does not heap adverse judgment on the guilty one or cause his parents alarm; he is still a child, and his disobedience is excusable on that basis. The most adults do to remind him of his shortcomings is to contrast his behavior with another child's: "Dorothy is good help all the time. Even if she's smaller, she's better help than Helen. I don't know why Helen doesn't like housework." By and large, however, children do their share of the work and do it without much pressure.

PLAY ACTIVITIES

857 As he nears ten, the Papago child's leisure time gradually decreases, for the increasing number of younger children pushes him more and more into a supervisory role. Though he begins to be a working member of the family

earlier than is usual among many white groups, nevertheless the Papago child still has a good deal of time for play. 857

Siblings and cousins of the same sex and approximate age from two or three neighboring households usually play together. Boys are free to roam the village and fields, but little girls must play near a habitation and can go from house to house only under the watchful eye of adults. At home brother, sister, and cousins often play together, but elsewhere boy-and-girl groups are seldom seen.

In play groups there is little quarreling. The older boys or girls make decisions together, and the smaller ones abide by them. Older children try to settle differences with their juniors peaceably; by so doing, they can get their own way at least part of the time, as they seldom would if every difference were taken to the elders. Even the boys rarely quarrel violently; a good deal of scuffling and wrestling goes on but few real fights. If a quarrel does occur in village play groups of either sex, the children go to their homes and stay until the incident is forgotten. 857 578

Interest in the old Papago games—shinny for the girls, racing and kickball for the boys—has waned. Occasionally children play the stick game when they are at the saguaro camp, but they must ask older people what the rules are. Despite their rapid disappearance, the sports of former days have not been replaced by American games. Children in the eastern districts play baseball, football, and basketball at school, but such games are less frequent in the West. Jackstones is popular among little girls all over the Reservation (probably because it resembles an old Indian game for girls),[1] while little boys play marbles. 857

Purchased toys have not become a part of the Papago child's life. Boys sometimes have coaster wagons or toy automobiles, and girls ordinarily have a doll or two from the store when they are little, but interest in such toys is never very great, and they are abandoned by most children past the age of eight. [439]

Most often children amuse themselves with toys or games created from things at hand, odds and ends picked up in the yard. Boys are especially adept at this; a child may amuse himself for an hour with a band of inner tubing, seeing what strange noises or shapes he can produce with it. Boys make slingshots and aim at targets or take turns pitching knives, and they fashion rough figurines from moistened desert soil. Much of their play is imitative: they dance, sing, and play imaginary musical instruments at a make-believe fiesta; they play cowboy with sticks and bits of rope. Probably the latter motif predominates, for every boy wants to be a cowboy. If a horse is corraled near the

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[1] See Ruth Underhill, *Social Organization of the Papago Indians*, p. 146.

[Text continues on p. 135-Analyst]

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PLATE XIII

Chuck Abbott

Young Cowboy

[p. 134]

house, they will spend hours playing around it, patting it, and leading it about. 857 A boy of this age is delighted if someone gives him a wide-brimmed hat, a bright silk shirt, high-heeled boots, or any other part of a cowboy's regalia.

Little girls' play is also imitative. They enjoy the rag dolls made by mother or grandmother, and they are often seen playing house in a corner of the yard, out of the way of the women at work but within sight and call. Girls over eight are usually with the older women. Sometimes they help or run errands, but, even when not working, they prefer to stay near by, joining in the women's conversation now and then, while they amuse themselves by dressing each other's hair with ribbons, looking at snapshots or illustrated magazines, or perhaps playing records on the phonograph.

Dogs, horses, and cattle, which can bring sickness, according to Papago 857 belief, are nevertheless played with freely, and all children play with the 231 family dog. Papago dogs, kept as workers, not as pets, are usually large enough to scare the coyotes away from the house, but they are thin and underfed because as a rule they must forage for themselves. Adults are sometimes fond of them, but ordinarily they are kicked about and handled roughly. Kindness to animals is undeveloped among the Papago, perhaps (as Underhill has suggested), [825] because animals have magic power and therefore have no need of special consideration by men.[2] The attitude of children toward animals reflects that of adults; they play with the dog often but are unconcerned if some trick of theirs hurts him. The adults themselves appear to be amused at the child's ingenuity and the animal's efforts to escape.

By the time children are five they need no longer be warned against handling 857 wild animals, living or dead, for they know that disease will surely 825 come as a result. They stay away from animal burrows and show little curiosity about the wild creatures of the desert.

Perhaps the most exciting play that the child knows comes at the fiesta. 857 In the western districts children attend four or five celebrations a year, most of 527 them outside their own villages. In Baboquivari fewer fiestas are given, and children do not so often attend those in other villages. As soon as the family arrives at the dance ground, the child leaves his parents to join a group of his own age and sex and returns to his mother only when he is hungry or sleepy.

Boys of five through ten seldom join in the dancing. They play around the dance ground, pretending to be cowboys, scuffling and shouting much as they would at home. Hearing the music, watching the dancers, and keeping out of the way of drunks adds to the excitement.

Little girls often start the dancing and are on the dance ground with one

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[2] Ruth Underhill, *Singing for Power*, p. 49.

857 527 another much of the evening. At other times they sit on the benches, watching all that goes on and chatting merrily with their friends. When they grow tired, they join some of their female relatives in the church for a nap.

MODESTY AND SEX TRAINING

864 As indicated earlier, Papago boys and girls of five to ten usually work and play separately. But brothers and sisters or males and females of this age do not avoid one another. When siblings of opposite sex occasionally join forces, they play freely, even to wrestling together for the possession of some desired object. Brothers, sisters, and cousins may roam from one house to another in mixed groups, but couples are not seen alone, even though they are siblings.

Children of five to ten have already developed great modesty about their bodies. A person secludes himself in a room of the house to bathe, and no one enters until he is reclothed. Papago undress only partially for sleeping, so that brothers and sisters sleeping together or in the same room do not expose the genitals. Children scatter behind separate bushes to urinate. Little girls at play are careful to keep their skirts down and pull their dresses well around their legs when they sit on the ground, lest they be teased for immodesty. (Surprisingly enough, when they are scuffling with their brothers, they seem unmindful of their skirts.) Boys playing together are not so shy of exposing themselves and will swim nude in the *charco* or horse tank.

There is no indication that children of this age group are introspective about sex. Sexual intercourse as a part of adult life can scarcely be unknown to them in view of Papago sleeping arrangements, and they all understand the function of pregnancy. Whether adults try to impart sex knowledge to children or they merely pick it up from what they see or hear is not known. Quite probably the latter is the case, since Papago children are trained not to ask questions and verbal explanation (except by way of lectures on virtue) is not a Papago teaching method. There is opportunity for children to acquire sex knowledge [831] casually, for jokes and allusions to reproductive processes are rife in everyday conversation. Nor is sex spoken of only among adults; female relatives, for example, sometimes tease fat little girls by saying that they are pregnant.

THE CHILD IN HIS HOME

855 The Papago child of five to ten is usually happy in his home relations. In this period the mother shares with the grandmother the dominant position in the lives of her children. The mother assigns to each child his household tasks and does much of the persuading, arguing, or scolding that is necessary. But she is also responsible for the child's happiness, and he can expect indul-

gence from her, even at considerable inconvenience to herself. For example, one mother who moved to the Salt River Valley cotton fields for the winter took her son out of school because he wanted to go along, though she preferred that he remain at home.

Little girls have an especially close companionship with their mothers. Together mother and daughters do the housework, discuss the local gossip, and amuse themselves with magazines and pictures in moments of leisure. During the summer, when most women and girls take afternoon naps, each little girl lies down beside her mother.

The father, on the other hand, has no such intimate relationship with his children of five to ten. He no longer fondles them, for they have now grown too old for such demonstration to be proper. Training is largely in the hands of the mother and grandmother, although, if the father is present when adult intervention is needed, he does not hesitate to step in. If the grandparents are feeble, the father may do more teaching and disciplining. Some men, particularly those in the eastern districts who were trained in boarding schools are greatly concerned that their children should "amount to something," and they exert much control over their offspring, particularly the boys, even though grandparents are present. They lecture their children on proper behavior, see that they learn to work, sometimes spank them, and in general devote considerable effort to seeing that the youngsters do as they should. Some children are afraid of their fathers when they are drunk; several boys and girls told the writer that they did not like to go to ceremonials and fiestas because their fathers grew violent. On the whole, however, children have a friendly respect for their fathers and obey their infrequent orders with alacrity.

Grandmother is much more important to the average child; she takes on much of the rearing of children of this age, directing their activities, as she does those of the adult women of her household, and overseeing the girls' first attempts at housework. If youngsters misbehave, it is she, rather than the mother, who is likely to lecture them about what a good Papago should and should not do.

But grandmother is not merely a disciplinarian and head of the female household. Her affection and pride in her grandchildren are real and powerful. Because she is relieved of the more strenuous housework, she has more time than the mother to devote to the children's troubles. Her decisions are not hasty, and she tries to see that all the children are ultimately satisfied, hence they are likely to appeal directly to her for help.

From grandmother children often learn what they know of Papago tradition and folklore. Particularly in the summer when the family takes the children to the cactus camp, grandmother is in great demand as a storyteller and a singer. She shows them the little footprints of I'itoi and the tiny caves where he lived long ago. She tells them how to pick the fruit of the cactus and leave the rinds on the ground with the red linings exposed, so that rain will come.

Grandfather is also an important figure in the child's world. As the head of the household he has final jurisdiction over everyone in it. He is not concerned with child-rearing as he was in the old days and, if he is still active, is away from the house a good deal of the time; but he sometimes plays with his grandchildren and is affectionate in his attitude toward them. From him, too, the children hear stories and songs of the old life on the desert, and they listen with respect to his lectures on good conduct, which are often given for their special benefit.

With the other adults in the household, the child's relationships are probably rather casual. Aunts and adult cousins may supervise him when mother or grandmother are otherwise occupied, and, though uncles are affectionate and will settle disputes if need be, little girls have almost no close contact with them, and little boys only when they are playing around the fields or corrals. Sometimes there is a close bond between a young unmarried woman in the household and the children of five to ten, especially little girls. Through her the younger children can almost enter the adult world. She is a sort of playmate who meets them without condescension on a somewhat grown-up level. Little girls will spend as much time as they can with her, hang on her arm affectionately as she walks about the village, sleep with her at night, and help her during the day. Boys, however, usually feel no such bond with a young unmarried man of the household, probably because they are as yet unable to share the tasks and interests that keep him away from the house so much of the time.

Relationships of the child of five to ten with his brothers, sisters, and cousins vary considerably according to the age of the other children. Older sisters and brothers seldom join the younger ones in play and are concerned with the youngsters' activities only when they are put in direct supervision over them. When older girls are left in complete charge, the younger children realize that they have the authority of adults and seldom take advantage of the situation. Older brothers have little to do with their small sisters ond only infrequently join in the activities of their little brothers. The younger children often look up to the older ones and imitate their more adult ways or personal mannerisms.

Though boys of five to ten seldom have to take care of younger children, in

households where there are no adult females or older sister, a girl of this age 855
may have considerable responsibility for a younger brother or sister. Even a very small girl is extremely proud of this assignment, for she is thereby first placed in a position of authority. She spends much time looking after him at home and must carry him on her hip when she plays away from the house, but the little girl seldom resents the comparative restriction of her movements or the fact that, if she does not indulge the baby, his howls will bring his mother's interference and rebuke. Resentment toward the mother is forestalled by the young girl's claim to indulgence from an older child and by right of appeal to her mother if it is not granted.

It is clear that under this system no one child can be the object of favoritism throughout life.[3] And, yet, identical behavior toward each child at a given time is likewise impossible, since the treatment of an individual is always relative to his age position. No question of unfairness or favoritism is raised either by parents or by children.

GOING TO SCHOOL

We have seen that the Papago child is at liberty to make many decisions for 858
himself which, in white society, ordinarily are in the province of parents. One 871
of these decisions is whether he will go to school or not.[4] In reaching a conclusion, he probably has certain conflicts to resolve: he is likely to be shy of white people, an attitude which may be reinforced by distrust if his family belongs to a conservative group; on the other hand, older children tell him that going to school is fun because it gives opportunity for knowing children from other villages and for being away from one's own home and the work to be done there; further, they say, white people are novel and interesting creatures, even if a little fearful. The child usually makes up his mind without pressure from his family. In the eastern districts most young children now expect to go to school, and their parents encourage them to do so, and in the West an increasing number of small children are enrolled.

Even after he has decided to go, the child is often under no pressure from his family to attend regularly (see chap. vii). If he goes to school in another village, he travels by bus, the driver of which acts as truant officer. Many drivers coax the children to attend every day and conscientiously report reasons for absence, but they never threaten or command a child.

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[3] The few cases of deliberate favoritism which appear are apparently due to special circumstances. The writer observed only two. In both cases the favored child was an only son and the youngest child. Both mothers had previously lost sons, and their devotion seemed to be centered in the surviving one.

[4] The field work on which this study is based was done before the tribal council made school attendance compulsory (see chap. vii).

872 The general objectives and methods of the schools have been discussed in chapter vii; here we report the child's reactions to them. The day at school described below is based largely on observation at one government school in Hickiwan District. Other government schools differ in details; those at Sells are larger and better equipped, and in several greater academic progress can be and is expected of the student.[5]

The new pupil is seated with four or five of his age mates in a room accommodating all children from five through ten. He is not highly restricted in the schoolroom but can move around or talk with others as he wishes if he is quiet. Older brothers and sisters are eager to assist the younger ones, perhaps translating for them the teacher's instructions or showing them how to use school materials. The atmosphere is usually relaxed and pleasant. If the child [191] begins school with no knowledge of English, which is very likely, one of his first tasks is to learn the English names for everyday objects. He learns to use elementary readers and to count up to one hundred in English. Before he goes on to the next group, he understands some spoken English and will answer simple questions, usually with "Yes" or "No." He is also taught a few rules of hygiene, which are reinforced by daily brushing of teeth and washing of hands and face at school.[6] This process may take several years, but no effort is made to hurry him.

Manual skills are taught in artwork and in play with American toys; supervised play, both in and out of the schoolroom, is a part of the program. Lunch is prepared in the school kitchen by an Indian cook.

On the playground a child associates only with others of his own sex and age group. There is some interest in American games, but most play is unorganized. Boys play marbles, run and scuffle together, and enjoy the swings, slides, and teeter-totters. Girls rarely use the playground equipment. They may play jacks, but spend most of their free time loitering around the schoolhouse, watching the teacher or talking Papago with the cook. In all groups quarrels are unusual. When any competition arises, as it occasionally does among the boys, relatives support one another, and children from the same village side together, regardless of age.

On most parts of the Reservation, going to school is the child's initial contact with whites. His first teacher is usually a woman. The youngster is ex-

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[5] Experience in the mission schools, with their more conventional curriculum and religious emphasis, is doubtless different, but the writer could make no observations of them because there are no mission schools in Hickiwan or Gu Vo districts.

[6] Except among children in the extreme West, where schools are relatively new and there are few English-speaking Papago, youngsters often surpass the academic attainments described here by the time they are ten years old. This is particularly true in Baboquivari District.

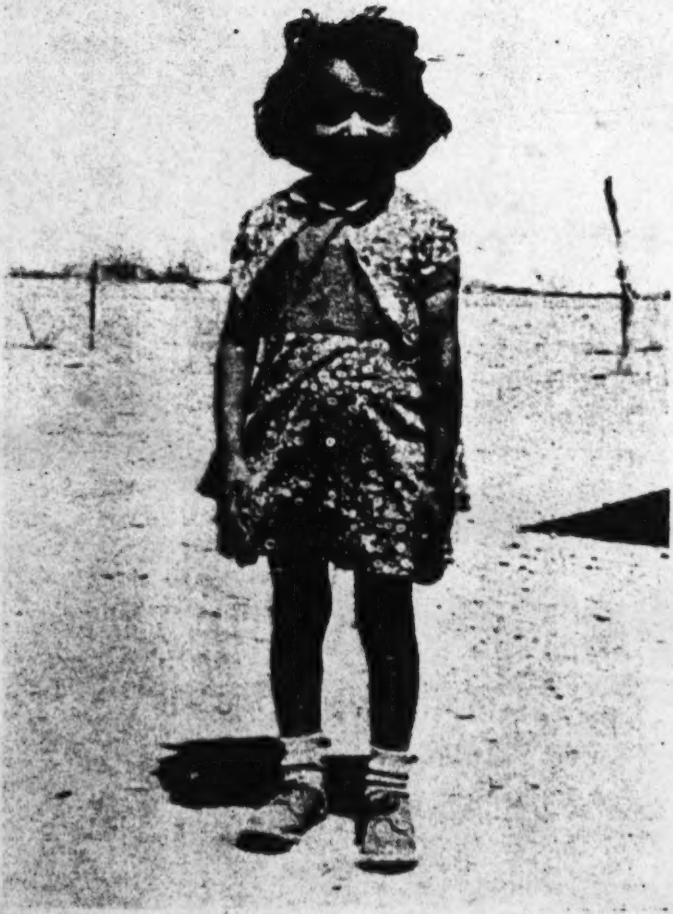
[Text continues on p. 144—Analyst]

PLATE XIV

Chuck Abbott

THIRD-GRADERS AT SELLS SCHOOL

PLATE XV



Rosamond B. Spicer

LITTLE PAPAGO GIRL

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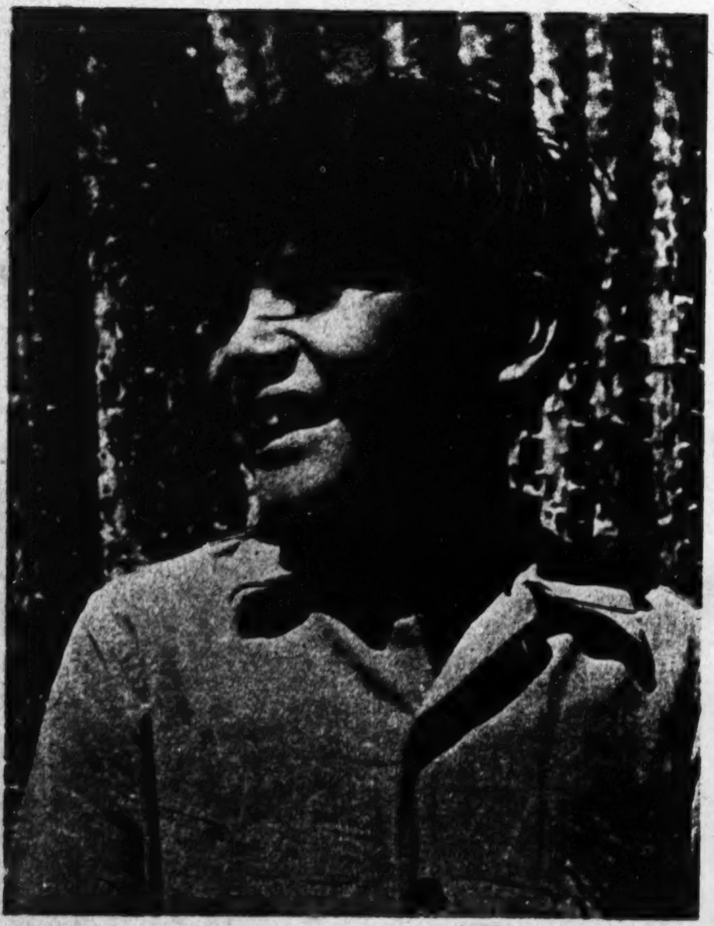
PLATE XVI



Chuck Abbott

YOUNG PAPAGO BOY

872 tremely shy with her in the beginning, staring soberly at her when addressed, sitting at his desk without moving, and following the example of others when response is expected of him. He resents any physical contact with the teacher and shrinks away if she leans over to help him or puts a friendly hand on his shoulder. In a fairly short time, however, his shyness decreases; he talks in Papago to the other children in front of the teacher, speaks up when reciting, and sometimes even begs to be "next." When the child relaxes into the fun-loving little person he ordinarily is, he frequently becomes noisy and has to be asked to be quiet. He does so, momentarily at least, and takes the rebuke as a matter of course. Ordinarily he minds the teacher rather well. Little girls spend a good deal of their free time with the teacher, watching her every move with curiosity, trying to talk with her, and always beaming at any attention.

SICKNESS AND HEALTH

753 Long before he is five years old, the Papago child knows and fears sickness.[7]
857 He has already learned that contacts with animals and with ghosts appearing in animal form may make him ill. Now he is taught that his own bad thoughts may also bring sickness (see chap. vi), and he has also learned to fear the power of the "bad" medicine man or witch.

In time of illness attributed to any of these causes, the child has implicit faith
755 in the "good" medicine man, for the shaman is often someone he knows or
957 even a relative. The youngster has no fear of him, although he does stand in some awe of the medicine man's power to communicate with the terrifying animals and ghosts. During this age period the shaman does not perform over the child any rite similar to the birth or puberty ceremonies, but he becomes a familiar and trusted figure.

857 To the school doctor and nurse, however, the child's reaction is very differ-
759 ent. When he undergoes a physical examination at school each year, he is
609 liable to be very frightened; he does not like to be touched by the white medicine man, and he resents being even partially disrobed. The teacher knows this and tries to fortify him while he is being examined. After several visits of the doctor or nurse,[8] the youngster becomes somewhat accustomed to them and, if not undressed, will submit to examination with no show of nervousness except extreme quiet. He will allow external medicines to be used on him and will take cough syrup, and sometimes he asks the teacher to clean or bandage a sore or cut.

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[7] For discussion of the health of Papago children see chap. xii.

[8] Doctors come to the school once a month, nurses semimonthly.

THE CHILD FROM FIVE TO TEN

THE CHILD AND THE CHURCH

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The Papago child of five to ten participates in church services chiefly as a listener. Among both Sonora and Roman Catholics, small children carry candles and *santos* in the religious processions which precede the dancing at fiestas, but this requires no special training.

Sonora Catholic children accompany the older women of the household to the church when they go once a week to burn candles, sing, and pray, but the youngsters play outside the church most of the time and come in only occasionally to listen or to sleep. Little girls try to sing the Spanish hymns, and frequently they have learned a few by the time they are ten years old. The boys come to the church less often as they grow older, and they seldom learn hymns.

Roman Catholic children in the western districts see a priest only once or twice a year, when he comes to say Mass and to proselytize. Since the missionary wishes to establish good relations in order to facilitate his work, he is friendly and informal with both children and adults; he may even help the family harvest a crop or do some other farm work. Between his visits, the Roman Catholics of Hickiwan District conduct their own services in the same manner as their Sonora Catholic neighbors, and the children have the same unimportant roles.

In the eastern districts, where there are Roman Catholic churches and priests to conduct services regularly, children go to Mass with their parents. When they are about nine or ten, they begin going to confession. A few youngsters serve as altar boys and spend a good deal of time in services or instruction. Priests maintain a rather formal relationship with their parishioners, and children seldom are on familiar terms with them; the sisters teaching in the mission schools are also rather distant in their attitude toward the children.

Children of Presbyterian families go with the adults to church. Although taking no part in the service, they sit quietly and appear attentive to the preacher. They like to go with their families to the annual camp meeting at Sells, where they can be with other children and enjoy the music and emotional fervor of the revival.

THE CHILD'S HORIZON WIDENS

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When the child is between five and ten, his horizon widens greatly. If he goes to school, he meets children from other villages, and at the fiestas he sees relatives of all ages who live in near-by communities. Since the western villages are smaller and fewer and fiestas draw crowds from greater distances than in the East, the western child comes to know (if only by sight) nearly

857 574 609 every person in six or eight villages by the time he is ten. Intervillage visiting is not quite so commonplace in the East. Hence, although every Baboquivari child has relatives in nearly every village in the district, he may see some of them rarely or not at all. In both East and West a family with a car will occasionally visit villages a long way from their own.

857 609 During this age period the child probably has his first meaningful contacts with white people. Children in western Hickiwan meet the white tradeswoman when they are still very young; since she speaks Papago and hands out treats to the children, they enjoy visits to her store.

Government employees other than teachers, doctors, and nurses are seldom seen by children of this age in the western districts. Because the villages are so remote and for years many westerners showed great antipathy to government policies, Agency representatives went to Hickiwan and Gu Vo very rarely. In recent years the situation has been changing, but official visits are still few. To western children the coming of the white men from Sells is a novel and exciting event, but youngsters who formerly fled indoors to peer out at the visitors with awe and some fear now slip outside the house to stare with avid curiosity.

On the other hand, in Baboquivari and Sells districts, Agency cars and trucks are an inevitable part of the landscape, children see government employees almost every day, and tribal council debates and court proceedings are common gossip. All the children have been in the town of Sells many times and have some understanding of the Agency as the center of Reservation activities. The visit of an official to an eastern home is almost as exciting as it is in Hickiwan or Gu Vo, but it causes much less apprehension.

The white people whom Papago children meet on the Reservation are almost all adults. In Sells the children of white government employees go to the public school, which is part of the Arizona county school system, and they do not play much with Indian children. However, Papago children are friendly to the white child they meet on their own ground. At Hickiwan Village in 1942–43 the teacher's eight-year-old son attended the Indian day school. He was easily accepted into the play group of lads his own age, and some who lived near by often came to see him after school. The two-year-old son of a field worker for this study lived with an Indian family, spent most of his play time with Papago children, and spoke more of their language than his own.

When the Papago child goes off the Reservation with his family to work, he meets people of other races and nationalities.[9] His contacts with them are casual and largely impersonal, but they leave a lasting impression. If his family goes to the Salt River Valley cotton fields or truck farms, he associates with

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[9] The relations of adult Papago to other ethnic groups are discussed in chap. vii.

Pima Indians; he may be related to some of them. Yaqui Indians, with whom 857
Papago do not mingle so freely, also work there. The child may see Negroes 609
working in the fields or perhaps colored troops stationed near Ajo, but the
Papago consider "the black ones" social inferiors and do not associate with [186]
them.

Mexicans are encountered in many towns near the Reservation. They live 857
near or among Papago who are working in town, and the child may be taken 609
into Mexican stores. But the average Papago child's most memorable contacts 484
with Mexicans occur on the annual pilgrimage to the church of San Francisco in Magdalena. The two-hundred-and-fifty-mile trip is the longest which many Papago children ever make, and they enjoy it to the utmost. The days of preparation are busy ones for the child, who runs many errands and keeps the babies out of the way of hard-working adults. On the way the family may pass through Sells and Tucson and perhaps have a little time to look into the stores. Magdalena itself is a paradise for the child. The booths with their bright clothes, strange foods, and fascinating knickknacks, the crowds in the plazas, the music in the bars and streets—all fascinate him. The blessing received by
kissing the statue of St. Francis, he is taught to believe, is worth the long wait [75]
in the crowded cathedral, for it is his most powerful safeguard of good health throughout the coming year.

More frequent are trips to towns near the Reservation. Children from the eastern districts go infrequently to Tucson, and all the children from the western villages studied have been in Ajo many times. Nearly all the westerners and many from the East visit the homes of relatives working at the Ajo copper mine. In town Papago children love to go to the movies and buy comic magazines, even though they do not understand English. They spend a few cents for candy and stand about the streets watching all the people, particularly the strange whites. As at the fiestas, little girls stay close to the women, but boys run about by themselves.

For years, school children of the western districts have gone to the municipal Christmas Eve celebration in Ajo. They travel in the school bus and on arrival run about the town square. A uniformed band plays near the huge decorated trees in the park; there is a parade, with Santa Claus in a sleigh, and treats of candy and fruit for everyone. The youngsters enjoy it all, but they usually skip the parade and other preliminaries to establish themselves in line to receive candy. They are not shy and will push as hard as Mexican or white children
to get to the front and enter the line a second or third time to get more candy. [576]
It does not occur to them that this might be unsportsman-like; the candy is being given away, and the youngsters assume that they are welcome to all they can eat. To them this is a whiteman's fiesta, and at a fiesta the host always says, "Come in and eat; eat all you want." They do.

Chapter X

THE CHILD FROM ELEVEN TO EIGHTEEN

882 BETWEEN the ages of eleven and eighteen the Papago child enjoys near-adult status. The change takes place gradually, but beginning about the eleventh year—even before he is physically mature—he begins to put away childish things. The eleven-year-old no longer takes part in active play. Toys of all sorts lose their appeal for him. He ceases to be interested in play that imitates adult pursuits; if he cannot participate in real activities, he wants no make-believe. At this age, girls and boys dissociate themselves from younger children and disdain to join them as equals in play groups; instead they make an obvious effort to identify themselves with adults, particularly those in their early twenties. To a large extent the eleven-year-olds assume the deliberate, unhurried physical bearing of the mature Papago. No longer do they scuffle, run, or skip—those things are for children.

Before the end of the adolescent period, a young person is accorded several rights that anticipate adult status: he is granted more personal freedom, is given a full share of the family work to do, is sometimes intrusted with money to do the household buying, and has money and property of his own in the form of cattle.

At about this time the child becomes fully aware of a third guiding principle
882 in Papago life. From infancy he has known that little children must be kept
562 happy. As he grew older, he had his first taste of the responsibilities and privileges of the authority that comes with age. He now becomes fully aware that in most matters the male is superior to the female.

This notion is not new to the child. Between five and ten the Papago boy has been much freer to roam away from home than has his sister. Children know that their mothers go nowhere outside the village without being escorted by a man and that most of the money in the family is in the men's hands. They also may have noticed, at Magdalena and elsewhere, the futility of their mother's concern over their father's drunkenness.

THE CHILD FROM ELEVEN TO EIGHTEEN

At adolescence, however, the general dominance of the male becomes very clear. Though a young man's authority may be held in check by the seniority rule, boys are free to come and go as they please when their help is not needed in farming or herding, and they may begin to work for wages. They expect their sisters and the other women of the household to feed them and keep their clothes clean for them at home. 882 562

Adult women have much less control over a boy when he reaches adolescence. He is sometimes asked—never commanded—to do some household chore which requires strength, but his compliance is regarded as a favor. He associates almost completely with men or boys his own age; women no longer have much to say about where he goes and how he conducts himself, whether or not he should go drinking or courting. His mother and grandmother may lecture or try to persuade him, but he will not necessarily do as they wish unless the father or grandfather backs them up. Yet the boy has affection and respect for his mother and grandmother, and their influence, though perhaps indirect, is strong.

At home the adolescent girl joins freely in conversation with her brothers and other male relatives. She understands that a woman's duties include supplying men with meals and clean clothes, and these tasks she expects to do unassisted should the occasion arise. She depends on the men to take her to town or to fiestas; she considers them kind and generous if they do, and she hopes that her future husband will be as good to her. But a girl does not complain if the men make five trips to her one; because they are men, that is to be expected. She is respectful to her father and grandfather and affectionate as well, though demonstrating this affection would be thought in bad taste. With all the men of the household the girl is completely casual, although she would not leave the environs with any of them unless another woman were with her.

Even the newly acquired rights of boys and girls increase their responsibility to the family. By the time the Papago child is adolescent and can make more decisions for himself, he is conditioned to make these decisions not in terms of his own desires alone but in terms of the welfare of the whole household. If his judgments are unwise, his elders' question, "What will people think?" does not mean "think of you" but "think of us all." He is constantly reminded of his role as a member of a functioning family unit.

THE GIRL BECOMES A WOMAN

In the old days the Papago girl during one period in her life was the center of family interest and activity. This was at the time of her first menstruation, which signalized her readiness for marriage. During this time the girl was 881

881 thought to have strong powers of good and evil. She was segregated in the menstrual hut, and her diet was restricted. An older woman relative instructed her in her duties as a woman and bade her work hard during her segregation so that she would be industrious all her life. Before the family rose each morning she fetched wood and water for them, but she could not enter the house or see or speak to her male relatives, lest she bring evil to them. During the day she worked diligently at basketry and talked with the women who came to visit her. She was ritually bathed in cold water on the fourth and eighth day, when her segregation was ended, and the celebration of her maturity began.

Every night for a month the girl was feasted by her family and other relatives. Special song cycles were sung, and the girl and her friends spent all night in a ritual dance. At the end of the month she went to a medicine man to be purified with sacred eagle feathers and a drink of magic white clay mixed with water. Sometimes she was given a new name which the medicine man had dreamed.

A girl's readiness for marriage is no longer celebrated with dance and feasting, but the purification ceremony is still very prevalent. This rite is necessary because the girl is in a condition dangerous not only to herself but to all her relatives; unless she is made clean, she may bring sickness and death to any of them. The story is told of a girl at boarding school who was not purified because there was no one to perform the rite; this was considered the cause of her uncle's death. Another child refused the ceremony; later her little brother was bitten by a rattlesnake, and to this day she is called "the girl who killed her brother." There are many such tales which emphasize the still prevailing belief in this rite. Decision to undergo the ritual is not a matter of personal taste. The girl is never forced to drink the white clay, but powerful pressure reminds her of her responsibility to the family.

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883 In the old days the puberty rite was followed almost immediately by marriage. Now, as a rule, girls do not marry before they are at least sixteen, but they spend much time and thought in preparation for marriage. The adolescent girl learns to cook, launder, keep house, and care for children. She helps in the field with the bean harvest, husks, shells, and parches corn, and prepares the squash for drying. In summer she gathers saguaro fruit and learns to make jam and syrup. By the time she is eighteen she is quite capable of taking complete charge, should it be necessary. During adolescence she probably also learns how to weave baskets. This craft is useful in itself and often brings income which is regarded as the girl's own.

883 It is usually a girl's mother or grandmother who specifies her tasks and admonishes her. It is also these two who arrange to get her the new dresses or

ribbons she wants and relieve her of work occasionally, so that she may join 883
her friends. However, the domestic labor which she shares with all the women of her household is continuous and confining, and there is little time left for village visiting. Their common effort and well-nigh exclusive companionship results in close bonds of affection between the women.

A reputation for proficiency in the household arts helps the girl to make a 581
good marriage. Even today, when marriages are no longer arranged on the basis of suitability to family needs, men look on industry (in the girl and her family) as an exceedingly valuable attribute, and it is a criterion in choosing a wife.

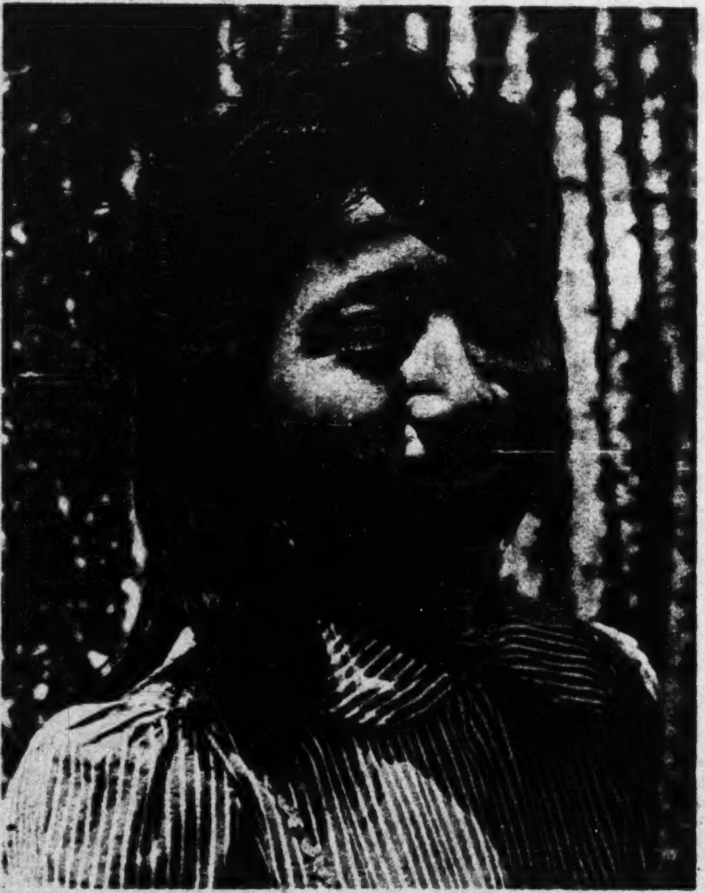
Papago girls are far from indifferent to their appearance. Dress and good 883
looks occupy much of their time, thought, and conversation. Many dresses are 291
bought in town, and these serve as models for homemade clothing. Girls wear 301
low-heeled shoes, usually with ankle-length socks after the current fashion in the towns. Those in the western districts, who are nearer to white towns than the eastern girls, use cosmetics generously and wear a profusion of hair ribbons, pins, and other "store" ornaments. Baboquivari girls, though much more acculturated in other respects, are less inclined to imitate the fads of American and Mexican women, but they are not less interested in making a good appearance.

A girl spends most of her leisure time with other girls of her age in the 883
village, usually her cousins. Because young people often live some distance 572
apart and leisure hours may not coincide, the group is usually small. There is a persistent tendency for each girl to seek out one other for close companionship. Some girls make stable and lasting friendships; others shift from one intimate to another. Young girls do not ordinarily stray far from the house cluster, and they often loiter around the ramada where the women of the household are working; here they discuss the latest gossip, make jokes, or plan for some important event. They may entertain themselves with picture magazines, and sometimes they weave baskets together.

No one anticipates a fiesta with more pleasure than the teen-age girl. If the 883
event takes place in her village, she joins the women in making paper flowers 527
for the church and in preparing food for the guests. No girl goes to a fiesta by herself, and, if the celebration is in another village, she must be accompanied by one of the men of the family as well as by an older woman. Adolescent girls take no part in the religious phase of the celebration except perhaps to carry statues or candles in the procession. Dressed in their best, they sit together on the benches around the dance ground with the other women who wish to dance.

[Text continues on p. 153- Analyst]

PLATE XVII



Chuck Abbott

TEEN-AGE PAPAGO GIRL

[p.152]

THE CHILD FROM ELEVEN TO EIGHTEEN

Shortly after the little girls start the dancing (imitative ballroom style), the 883
adolescent girls begin. They dance together in the afternoon, for it is not until 527
evening that boys and men join the group. Then all through the night and 535
perhaps until noon the next day, the girls dance—usually with boys their own age, sometimes with men, otherwise with each other. Only the youngest of the adolescents—the girls of eleven and twelve—do not dance with males. Etiquette requires that the man come over to the bench where the girl is sitting to ask her to dance. He does not choose a partner until the music starts, hence there is no opportunity for conversation between dances. When boy and girl dance together, they do not talk or laugh; both are silent and completely serious. The instant the music stops, they break the embrace and go rapidly to opposite sides of the dance ground. There is little other opportunity for social intercourse between them at the dances, and girls are not supposed to leave the lighted area of the fiesta ground except to go into church infrequently to rest.

THE BOY GROWS UP

No ceremony marks the puberty of a boy, but just as certainly as the girl he [831]
is oriented toward the world of adults. When he is about eleven years old, a 883
boy begins helping the men of the household. He learns to plow, plant, hoe, 867
and harvest crops; to herd, rope, and brand cattle in the co-operative roundups; to care for horses, build fences, and repair buildings. Gradually, as his strength and skill increase, he learns to do a man's full share of work. No longer does he merely do odd jobs assigned him at intervals; whenever he is not at school, he is expected to help with the work at hand until it is finished.

From this time on his leisure at home as well as his working hours will be 883
spent mostly with the men of the household. Occasionally the teen-age boy will handle a small child or try to get him to walk or talk, and once in a while he may condescend to join his younger brothers in a game of marbles. Away from home older boys as well as girls show considerable concern for their younger siblings' welfare and proper conduct, but in the family group the adolescent boy is definitely associated with the men; he sits and talks with them while his younger brothers dash about the yard. If the family includes a man in his early twenties, the youth will probably be on intimate terms with him.[1] He is now closer to his father than at any time since babyhood, for his father teaches him and works side by side with him. Like all the men, the boy has great respect for his grandfather and works under his direction. It is the grandfather who talks [866]
about proper conduct, teaching the lad that a good Papago is honest and industrious and lives at peace with his fellow-men.

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[1] This relationship is comparable in many respects with that of five-to-ten-year-old girls with young women of the households (see chap. ix).

883 The adolescent boy is always casual and friendly with the women of the household. When the men are at home, they join the women working under the ramada, and everyone participates in the chatter and joking that ensues. Though most of the time the youth is away from his female relatives, he often stops at the house cluster for a few minutes during the day, bringing the women news of their men and any local gossip he has picked up. He occasionally lifts a heavy article for them or is helpful in some other way but is no longer expected to make himself generally useful around the house.

Outside the household the teen-age boy's most intimate associates are lads of his own age, but he is not limited to boys of his own village, for in herding or at the intervillage roundups he always meets and works with youths from other communities. It is not difficult to maintain these friendships, as a boy can usually catch a ride to another village or go on his own horse.

883 533 Many Papago boys of this age learn to play musical instruments, usually the violin or guitar. They play entirely by ear, learning the Mexican and American dance tunes from phonograph records. Two or three lads may spend many hours practicing together; the others always enjoy listening. Rarely does a boy under eighteen become proficient enough to play in the orchestra at a fiesta, except as a drummer, but, if he is an unusually good musician, he may replace a violinist or guitarist while the older man rests or eats.

883 527 292 Fiestas are great occasions for adolescent boys. They help to clean and decorate the dance ground and feast house. They keep the fires going and spread hot coals near the women's benches. For the celebration they dress in colorful cowboy clothes: freshly polished high-heeled boots, wide-brimmed hats, new jeans, bright silk shirts, and often leather belts or wristguards studded with colored glass.

882 527 273 The boys take no part in the religious phase of the fiesta, nor do they enter the church for rest as the girls of their age do. As they are too young to associate freely with men, but yet feel themselves much too grown up to stay with the women or play with small boys, the lads usually stand about the big fires and sometimes loiter around the parked cars where the bootleggers do business. It is not uncommon for boys as young as sixteen to have whiskey at a fiesta, but ordinarily they do much less drinking than the men. Some of the boys cannot afford expensive bootleg whiskey, and others are still under the influence of their mothers and grandmothers, who dread heavy drinking. [276] At any rate, few teen-age boys are involved in drunken fighting. Boys smoke openly and without fear of reprimand as soon as they have money for cigarettes.

883 The boys do not dance so constantly as the girls of their age, for they never

[Text continues on p. 156-Analyst]

PLATE XVIII

Jane Chesky

PAPAGO LADS MAKING MUSIC UNDER THE RAMADA

[p.155]

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883 535 The boys do not dance as constantly as the girls of their age, for they never dance with each other. If a lad is interested in a particular girl, he will ask her to dance oftener than the others, but he generally chooses many different partners during the night.

ADOLESCENTS AT SCHOOL

883 872 Papago children begin to drop out of Reservation schools at about thirteen, and few youths remain after they are fifteen. (The decrease in day-school attendance is partially offset by the increase in off-Reservation boarding-school enrolments from this group.) Few families except some in the eastern villages exert pressure on the young people to stay in school. Those who remain do so because they really want to, and their attendance is quite regular except when their help is especially needed at home on account of harvest, roundup, or illness. A few students (probably about the same proportion as in most white groups) remain at school because they are genuinely interested in learning; these are the boys and girls who attempt to use English outside the classroom and keep extra books in their desks for use in spare time, but the great majority come to school to be with friends from other villages or to escape the routine of work at home.

In the average government school teen-age boys and girls are placed together in one classroom. Since the group may include mere beginners as well as youngsters who can meet the standards of upper elementary grades in white schools, division within the room is on the basis of academic attainment. Instruction in the tool subjects is carried on much as in the younger group. Some adolescent youngsters can use a sixth-grade reader, a fourth-grade arithmetic, and a fourth- or fifth-grade spelling book. In most schools the children learn to carry on at least a simple conversation in English (the case depending upon the amount of contact with whites and the aptitude of the students); but they almost always remain shy in their attempts to converse with white people.

In addition to the tool subjects, two of the larger government schools give manual training to the boys and teach cooking and sewing to the girls. A few others keep beehives or chickens for boys to tend. In nearly every school the girls set the tables for lunch, help serve the food, clear tables, and dry dishes, all under the supervision of the Papago cook. Instruction in the mission schools is limited mainly to academic and religious subjects.

Some government schools have athletic teams, but playground sports are largely unorganized; adolescent boys throw and bounce a basketball or occasionally have a game of marbles, but they rarely use the playground equipment or scuffle together as the small boys do. No marked leadership is apparent, and boys of the same village do not group together as they did when

younger. Those who are musicians often bring their instruments to school; 883
other lads join them in the desert away from the schoolhouse, where they 872
sometimes practice for hours before an enthusiastic audience. Boys may gather around the bus-driver or teacher and spend the recreational hour watching the former repair a bus or pump. (The Papago are interested in machines and make good mechanics, but the schools offer no course in machine operation or maintenance, probably because too few older boys attend day school.)

Teen-age girls at school tend to pair off as they do at home. Two friends sit together on the school bus, ask to do kitchen duties at the same time, and spend their free time walking arm in arm about the playground or using the swings and teeter-totters, which they greatly enjoy. During recreation hours they do not spend as much time as the little girls with the teacher or Papago cook. Hickiwan girls may often be seen at noon primping before the mirror, recombing their hair or renewing makeup. Nearly all the girls try to present a nice appearance; they wear good dresses to school and groom themselves to the best of their ability.

Adolescents are much less spontaneous and friendly with the teacher than younger children. The boys respond rather freely to the male teachers at the Hickiwan and Gu Vo schools and occasionally talk with them about the war and the difficulties of staying in school when there is work to be done at home. Girls giggle in the presence of men teachers and never start a conversation. Neither boys nor girls are afraid of them, nor are they particularly concerned about their reactions to badly prepared lessons. Older students often try various [522]
tricks to get out of assignments and regard it as a huge joke if they are caught in the evasion. In the eastern districts the Papago parents' higher regard for schooling is reflected in their children's more serious attitude toward teachers and lessons.

With the women teachers at Hickiwan or Gu Vo the older boys are respectful and reserved. They readily perform any task she asks of them and answer her questions courteously, but they seldom start conversations with her. The girls are painfully shy and giggle in the teacher's presence at first, but they overcome their timidity enough to linger in the schoolroom occasionally and join in conversations and to refrain from dodging when the teacher touches them. Even so, they never attain the little girl's freedom with her. If something she says amuses them, they respond not to her but to one another; their appreciative glances and smiles are directed toward the other girls and do not include the teacher.

Teaching methods and inter-Papago relationships at Hickiwan and Gu Vo schools, described here, are similar to those of the other government schools.

[Text continues on p. 159-Analyst]

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[p.158]

PLATE XIX

Rosamond B. Spicer

YOUNG PAPAGO GIRLS

However, at all the missions, and at government schools in areas where educa- 883
tion is more enthusiastically fostered by the Papago, discipline is much more 872
strict and academic standards are higher. Furthermore, student-teacher relationships vary; when they see the teacher very frequently, children react to his or her personality rather than to the "white teacher" role.

In the western districts few children go beyond the elementary work offered by Reservation schools; most of them have been in school too short a time to begin to think of high school. Some eastern children, particularly those from Baboquivari and Chukut Kuk districts, leave the Reservation for upper grades or high school in government or religious boarding schools and there are always a few in college or trade school. Usually only good students are encouraged to continue in school. Priests and teaching sisters select the students for Catholic boarding schools. In Presbyterian families parents often stimulate their children's interest in further education. Students at government schools are encouraged to continue by their teachers, families, or perhaps by a social worker who sees in an off-Reservation school the solution of difficulties at home.

Going to boarding school is usually the Papago's first experience at living away from the Reservation for any length of time without relatives. However, at any school to which he goes there will be other Papago children. For a while they are homesick and talk constantly of Papaguería, but before long most of them recover their good spirits and, after their first vacation at home, are ready to go back to school.

At boarding school boys and girls receive vocational as well as academic instruction. Some are selected for athletic teams, play against other schools, and even get their names in the sports section of white papers. They take part in school plays. They learn their way about big towns and, though under strict supervision, are rather thoroughly exposed to American ways of life. However, few Papago have this experience; in 1941–42 only 154 were enrolled in boarding schools.

THE YOUTH'S WORLD GROWS

During adolescence young Papago associate increasingly with adult relatives 883
from their own and other villages. Girls regularly join the groups of women from different households who work together at laundering or sewing; boys work with men's groups at butchering or repairing fences. In accordance with the seniority principle, they accept direction and occasional correction from their elders and share the friendly affection Papago have for all relatives. If a boy or girl is particularly fond of any one adult, the intimacy arises entirely from personal choice.

883 494 As previously mentioned, boys are free to go to other villages when their help is not needed at home. Girls' trips to school on the bus are exceptions to the rule of constant female chaperonage. Sometimes school children get off the bus in another village to visit overnight in the home of relatives; mothers occasionally complain that their daughters stop in other villages rather than come home to help with the work. However, there is no worry concerning their safety, for the bus-driver brings word of their whereabouts, and they are assured a welcome in the home of any relative. Adolescents not in school use the bus to reach relatives in time of sickness, to help with the harvest, or just to visit.

883 756 A young Papago rarely loses his faith in the medicine man, though it may be dormant during any time he spends in boarding school. However, the adolescents begin to realize that there are some sicknesses with which the white doctor can cope more adequately than the medicine man. But the youth makes an ill-defined distinction between white men's diseases and Indian diseases, and he sometimes asks why animals do not seem to make white people sick. So he is often confused as to what to do when illness strikes and perhaps tries several courses to be on the safe side: he may take medicine prescribed by the white nurse in the morning, ask for a half-native rosary service in the afternoon, and have the medicine men in to sing and communicate with the spirits at night.

883 439 563 571 On the Reservation the Papago youth has little more contact with whites than he did as a youngster. Tourists have never swarmed to Papago villages as they do to the pueblos, for the Desert People are not romantic in appearance, and their principal extant ceremonies are not open to public view.[2] Buyers of cattle and baskets come, but they do not stay long. Older boys, who often herd the stock while their elders deal with cattle-buyers, have little to do with the buyers, but they learn what prices to expect and how to bargain.

883 563 571 Whites who live on the Reservation—traders, occasional miners, a few missionaries, and government employees—are familiar figures to the youth of districts in which they live or visit often. Adolescents' contacts with these persons are almost entirely impersonal, and few youths make any effort to change this situation. Some exceptional adolescents will talk readily with whites and are willing to act as interpreters, but in both eastern and western districts teen-age boys and girls are likely to face whites with a rather blank expression and would prefer to watch them unseen. When addressed by a strange white, the young Papago usually replies with "Yes," "No," or "I don't know." Often the brevity of the answer is due as much to difficulty of understanding or fear

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[2] However, many tourists come to see the old mission on San Xavier Reservation.

of making a ridiculous reply as it is to reserve. The youth will explain to 563 883 571
another Papago that he knew what the white was saying, but, unsure of his
ability to answer in good English, he just kept quiet.

As a rule, resident whites treat the Indians with friendliness strongly tinged 563 186
with caution.[3] They respect the Papago and perhaps like certain individuals,
but they know that Indians are sensitive in ways unpredictable to whites. The Papago largely reciprocate these attitudes. With rare exceptions, neither group seeks association with the other outside of business hours. The Indians admit that the white man has a peculiar magic which results in economic wealth, and this they frankly covet. But few would care to live with whites or even in their manner. To them, the Desert People remain "the people."

All teen-age Papago make more frequent trips off the Reservation than 883 484
do their younger brothers and sisters. Boys go whenever they can be spared at
home and can find means of transportation; girls are equally interested but must wait on the convenience of some man of the family. A young person of a western district probably has at least one relative who works in the mine at Ajo and lives there with his family; visits to these relatives are great occasions. The relatives in town live in frame houses or in shacks pieced together out of scrap iron, but even the poorest dwellings are likely to have more furnishings than western Reservation homes. Curtains, bedspreads, and tablecloths are in ordinary use, and all cooking is done indoors. With more leisure and cash, town dwellers go to the movies and buy store food, good clothes, and bootleg liquor. These are momentous matters for the Reservation youngsters, and they
are quick to imitate their town kinfolk. Girls readily adopt the town styles of [291]
dress, but boys can always be recognized as Reservation Indians by their Stetson hats, Levis, and cowboy boots. Clothing, amusements, and the easier living 883
are powerful incentives for young Papago to go and do likewise, i.e., get a job 464
in town.

A great many youth have been accustomed from childhood to going with their families to work in the cotton fields, but late adolescence bring opportunities for work away from home. Older girls who have more than a smattering of English can get jobs as housemaids in Tucson or Phoenix, and many young girls look forward to this opportunity to live independently for a little while before marriage. A wider variety of work is open to boys. With the increased demand for labor during the war, some Baboquivari lads of sixteen to eighteen left the Reservation for several weeks or months to work on railroads or ranches. Since the Papago are known as good workers, they can

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[3] This paragraph is drawn largely from Ruth Underhill, "Acculturation in the Papago Village of Santa Rosa" (MS).

883 always get odd jobs, such as mowing lawns, in the cities. Almost every youth
464 in the western districts works at the Ajo mine at sometime between the ages
[465] of eighteen and thirty. Here at unskilled labor he can earn $3.00 a day; in war-
time wages ran as high as $7.00.

Papago youth in mines, in cotton fields, or on ranches work side by side with
883 other Indians or Mexicans and have little direct contact with whites. White
466 employers treat the Indians with friendliness and often make concessions to
563 retain good workers, but away from work the Indians live together or with
Mexicans and Chinese in the poorer quarters of the city, so that it is the lower
strata of economic life in Arizona with which they become familiar. They do
not, however, experience some of the discriminations endured by minority
groups in many parts of the country: most cafes serve Indians, and they are
not segregated at the movies and other public places.

883 Young people working off the Reservation are relatively free from family
influence, and, though many send part of their wages home, they still have
593 much more money to spend than they ever had before. Now and then girls on
273 their own in the city drift into trouble and are sent home, but they seldom
[548] become recognized prostitutes. Boys are likely to spend a good deal of their
new-found wealth on liquor; their families at home expect the boys to do
some drinking, still they worry lest the lads become involved in brawls that
will lead to the white man's jail.

883 The youth himself is terrified of the law. Instead of being reassured by the
671 supposedly impersonal and impartial character of white men's justice, he fears
what seems to him its rigid inflexibility. If he does wrong at home, his family
may lecture him or even call in the village elders to talk to him about the error
of his ways, but the youth knows that he will be judged on his own merits and
not on what is written down in a white man's book. Most important, he will
not be shut up far from his family and his desert.

883 Sometimes young people marry when they leave the Reservation to take
582 jobs. By and large, however, they go for only short periods or at most a few
years. Family ties may become tenuous, but they are seldom broken. The wage-
earner usually sends money home and expects to return to the village
some day.

GETTING READY FOR MARRIAGE

562 Papago boys and girls do not associate in unchaperoned groups, for the girls
are kept under constant surveillance. In the old days a girl who went unaccom-
[786] panied away from the house cluster was considered fair game for any man or
boy. Even today in her home village a girl never goes anywhere alone, unless

it is the short distance to a neighboring house cluster, and then she is always in 562
full sight of her relatives all the way. Even in twos or threes girls are forbidden
to walk about the desert or to loiter where men are working.

In the old days marriages were arranged by families, and young people had 584
little voice in the selection of partners. The concept of romantic love has been 883
introduced by white schools, movies, and magazines, and today there is much [177]
more freedom of choice. But, as a rule, Papago girls and boys are still circumspect
in public. Though adolescents do not play together at school, they have
more opportunities there for talking together and flirting than at home.
Eleven- and twelve-year-old boys tease the girls, trip them up, or take their
books. Older lads are more likely to start a disturbance to gain the attention and
admiration of some particular girl; they are seldom disappointed. On the other
hand, some of the girls quite openly seek to attract masculine attention by
slight misbehavior in the classroom, and they often linger on the playground
to watch the boys' ball games, a delicate attention which is not unappreciated.

At fiestas a boy will dance oftener with the girl of his choice than with the 883
other girls. Sometimes they escape into the darkness away from the dance 836
ground for lovemaking. 527

How much sexual promiscuity takes place is difficult to determine, for the 836
Papago are conscious that their standards differ from those of whites, and they
do not talk freely on the subject. Sex affairs that are intended to result in marriage
do not seem merely promiscuous to the Papago, and many "Indian-custom"
marriages begin in just this way, often in the cotton fields, where
chaperonage is difficult to maintain. For sex relations that are not a prelude to
marriage, boys are seldom censured, but girls are blamed for "going off in the
bushes." However, the girl seems to be less severely criticized if she gives birth [848]
to an illegitimate child; neither the child nor its mother suffers social stigma,
and the situation seems not to affect the girl's chances for marriage.

The boy who wishes to pay formal court to a girl will find excuses to visit her 584
home, ostensibly to see a male member of the family. Everyone knows why he
is there and takes great, though courteously veiled, interest in the progress of
the courtship. The girl can discourage her suitor by disappearing on the pretext
of having a task to do elsewhere. If she likes the boy, she will remain in
the room while he is in the house; eventually he will find a way to propose, and
they will announce to their parents that they intend to marry. They begin 585
living together at once or soon afterward—usually in the household of the
groom—and, whether or not a wedding ceremony is performed, are thenceforth
regarded as man and wife. They have taken their places in the world
of adults.

Chapter XI

THE PAPAGO CHILD IN HIS SOCIETY

000 IN THE three chapters immediately preceding we have watched the Papago child grow up and approach the threshold of adulthood. We have seen what he learns and how he learns. It may be worth while at this point to consider briefly the applicability of this knowledge and why the child acquires it as easily and well as he appears to do.

As we have seen, Papago mores governing the distribution of authority, and
183 patterns of behavior among individuals are few and simple: young children
593 should always be indulged; age has precedence over youth; superior status rightfully belongs to males; and, in all important matters, there should be
602 unanimity of decision among those concerned.

These principles are so universally applicable that a Papago always knows how he is expected to behave when with other Papago. At the same time, these principles act as checks on one another and thus protect the individual. The oldest male of the group, who is granted authority on two counts (sex and age), cannot hold absolute control over his group so long as each member must approve his plans before action is taken. An old man is, logically, a leader in this society, but to wield power he must have character and wisdom that command respect. Similarly, any person who attempts to coerce those younger than himself may always be put in place by someone older. Ultimately, then, a Papago governs only to the degree that he has the consent of the governed, and concentration of authority is virtually impossible.

In the large Papago household, consisting of many people of all ages and both sexes, and in which there is always need for concerted action, these principles are in constant practice. A child has unlimited opportunity to learn, both by direct participation and by observation of the behavior of others.

Two facts are noteworthy in their effect on the development of the child's personality. First, the principles apply equally to *all* members of the household. No one relative, not even the mother, is so singled out that he has exclusive

rights to the child's affection or obedience. Just as there is no heavy emphasis 183
on any one individual, there is also no individual who must be treated according to a unique set of rules (such as mother-in-law avoidance or the special 593
relationships of nephew and maternal uncle which obtain in some societies). 602
Though a child often feels no special intimacy with any one person in the household, he may cultivate such a relationship with whomever he pleases.

A second noteworthy fact is that the rules for behavior in the household are applicable to relationships with other Papago. It is assumed that a child's personal contacts will be with blood relatives, whether in his own or another village, and for the most part they are. Furthermore, the pattern of mild domination by the elders, tempered by careful consideration of each individual's opinion, persists in the larger affairs of village, district, and tribe. It is true that, in the recent development of district and tribal councils, the need for knowledge of English and of white ways has increased the status of young men and women with schooling. In the household and in local affairs involving only Papago, however, the old pattern still prevails.

The survey of Papago's interpersonal relationships has shown that there is 183
no abrupt break between juvenile and adult life; there is no period of training, 884
the end of which signals absolute maturity or heralds the sudden assumption of full adult responsibilities. There are no separate rules for the conduct of or toward youngsters.

The indulgence granted to young children may appear to contradict the 183
above statements. But this indulgence may be regarded simply as an exaggerated respect for the child-individual's opinion. Because his rational faculties are as yet insufficiently developed and his training in group responsibility is in an embryonic stage at best, he must be humored in order to maintain peace within the family. As soon as, and to the extent that, he is capable of reasoning, the Papago spare no time or effort to work him into his proper position within the group, i.e., one individual with the right to a voice in and, ultimately, the approval of the course of concerted action.

By the time a Papago has reached biological maturity, he has, in general, accepted his role completely. He has achieved a neat balance between self-gratification and group consciousness, whereby he molds his personal desires into forms acceptable to the whole group.

It should be reiterated that no Papago child learns proper behavior by 183
memorizing rules. He is told that a good man is one who is honest and industrious, kind and peaceful, but he eventually gains a reputation for industry 84
only if he heeds the words of his elders—beginning with requests to bring in wood or tend the baby. It is equally certain that he can maintain peace with

183 861 his fellow-men and become known as a kind person only if he at all times respects the wishes of others, particularly those over whom he holds a superior position by reason of his sex or age.

155 183 Yet the machinery which impels the Papago to be peaceful, honest, and industrious is obscure. The dearth of punishment in child-training has been noted. Beginning in the second period of development, five to ten years, children are given ever increasing duties to perform. These tasks demand considerable time, often interrupt play, and are usually uninteresting. Yet parents have little difficulty in getting youngsters to work. The recalcitrant child is lectured or scolded; if he still refuses to obey, he is not ordinarily either compelled or punished.

Why does the Papago child usually accept responsibility without compulsion? Why, as an adult, with the personal freedom he enjoys, is he willing to subordinate his own desires in most matters to the will of the group?

First of all, the very early age at which training is begun is significant. Tots less than four years old are not infrequently given small tasks, and even at this time they are impressed with their responsibility for their younger siblings. This share-the-work program is begun early and maintained so continuously that it seldom fails to be effective. Among the Papago, children learn to work almost as soon as they learn to play; the happy childhood so much desired by adults for their children does not mean an utterly irresponsible one.

626 183 155 The second factor in the molding of Papago personality is one usually present in simple societies: public opinion censures those who deviate from accepted standards of conduct. In any community so small that all the members and their affairs are known to one another, this is a powerful force. Among the Papago there are almost no conventionalized variations from the normal behavior pattern; the guiding principles apply to everyone. No man can ignore them because of his wealth, position as village leader, or special skill. Rather such a man normally obscures his particular superiority and conducts himself in a manner hardly distinguishable from his average fellow-man. Personal achievement directed toward ostentatious self-gain is severely criticized by the Papago; the person who is outstanding in any way must maintain a modesty about his accomplishment that amounts almost to depreciation. At all times a Papago avoids drawing attention to himself and is embarrassed if he fails, for any person, child or adult, is ridiculed and criticized for conspicuous behavior. The facts that failure to perform in a socially approved manner will inevitably become common knowledge and that general censure is sure to follow constitute a powerful deterrent to breaking the mores.

Third, supernatural sanctions tend to enforce the Papago's sense of responsibility to his group. When very small, he is induced to do as his elders wish by the threat of illness caused by a displeased animal spirit or ghost. Supernatural sanctions also influence the Papago to maintain peaceful relations with his associates: not only is the Papago admonished constantly to avoid quarreling and becoming angry but he is also threatened with illness if he *thinks* badly of another or holds a grudge. Since there is scarcely anything that could stimulate a Papago to respect the feelings of his associates more effectively than his great fear of sickness, the Desert People evade situations which give rise to angry arguments. When together, they conceal their differences with politeness and an outwardly cordial manner. Grievances among them rarely reach a head; they are expressed in gossip or in still more indirect ways. Calling a spade a spade or dragging unpleasantness out into the open for airing and discussion is not admired, recommended, or practiced by the Papago. Their method is not a sneaky, grudge-bearing evasion but a realistic means of dealing with a problem inherent in their mode of living. Their world is small, and there is little escape from it; their interpersonal relations are restricted in number, intimate, and necessary for survival; the situation, to be tolerable, must be peaceful or at least under control in terms of every person concerned.

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A fourth factor in the molding of Papago character and behavior is the emphasis on seniority. In all his interpersonal relationships, the young Papago is constantly reminded that the privileges of superior position belong to those with senior status. Adulthood is thereby enhanced; it is an achievement worth the striving. So the child turns his back on the things strictly juvenile. His chief forms of play are imitations of adult work, and at an early age he foregoes these for actual participation in adult duties and recreation. The difference between child and adult activity is not so much one of kind as of degree. Because he is everlastingly reminded of the privileges proper to seniority and adulthood, the child is always reaching for them. Mere age is not sufficient to reap the full benefit, however; children as well as adults gain responsibility and prestige only if they are industrious, and skilful in handling people. Reliability and capability may put a child in charge of his younger siblings. If he proves himself able to manage them diplomatically, he has established his superior position. At the same time he has learned to conduct himself in the way acceptable to the society; he has learned to govern and at the same time respect the wishes of those he governs. His industry and diplomacy have achieved for him respect, prestige, and authority. He knows that industry and diplomacy will be equally effective tools for him tomorrow and throughout his life. This assurance is sufficient compensation for the sacrifices and frustrations of today.

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Part III

THE PERSONALITY OF THE PAPAGO CHILD

By ALICE JOSEPH

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Chapter XII

TESTS AS TOOLS

000 THE white person who comes from an eastern city to the Papago Reservation may expect to find a sullen, worried people whose expressions and attitudes reflect the melancholy, suspicion, and bitterness which a constant fight against starvation usually engenders. Instead, he will meet friendly and apparently relaxed men and women, and he will be particularly struck by their ready smiles and the laughter which breaks out often wherever a few Papago meet. Such a first impression may impel the visitor to find out what it is that brings ease and apparent happiness to these people who appear so poor and needy.

However, in trying to understand the Papago, the outsider will meet some barriers. Even after a fairly long stay on the Reservation and relatively close working relationship with the Papago, the visitor's slowly built up conviction that he knows these people as intimately as his city neighbors may be destroyed suddenly by some unexpected reaction of his new friends which he cannot fit into any familiar pattern of behavior. This apparently inexplicable reaction may make him feel like abandoning any further attempt at understanding the Papago.

Repeated experience has shown that lack of knowledge and subsequent misunderstandings may be largely responsible for many tensions and feelings of hostility between people of different cultural backgrounds and may often underlie or enhance the formation of prejudice. It is not enough merely to have good will toward a strange group, for few people can retain good will in the face of unpleasant experience which they do not understand or know how to avoid. Nor is good will necessarily combined with ability to recognize one's own ignorance or with enough drive and tenacity to acquire knowledge through repeated painful experiences. Apparently good will is vulnerable at different levels in different persons, but this vulnerability can be reduced by increased knowledge and understanding.

000 But knowledge of customs does not alone bring understanding of a people. Though customs and habits have their roots in the personalities that produce them, they may be manifestations of quite complex psychological needs and drives and have varying weight and significance. Knowledge and understanding which can remove not only surface frictions but also deeper tensions and firmly rooted prejudices require at least some acquaintance with the psychological forces which motivate behavior.

Long personal experience can indeed bring a knowledge of psychological reactions and motivations of individuals and groups which may help to remove at least some barriers to pleasant and peaceful interrelations. But scientific methods of analysis may perhaps show a shorter, and at the same time more reliable, way to this goal than personal experiences alone. Furthermore, scientific data can be passed on to greater numbers of people and in more nearly exact terms than can observations based only on personal experience.

125 While the preceding chapters tell about Papago land and life, the way in which Papago children grow up and are expected to develop, according to the pattern of their people, the following chapters will deal with actual personalities and with the problem of how far they may be influenced by particular living conditions and concepts of ideal and expected behavior patterns.

The choice of method upon which the psychological analysis of this study should be based was determined and partly limited by the war and the subsequent manpower and transportation shortages, and by a definite time limit in which the work had to be finished, but chiefly by the consideration that the methods selected should yield reliable results and at the same time be easily applicable and reapplicable for future use and checking. Besides, the objects of the study being children of a sociocultural background different from that of the research workers, the methods of analysis had to take into account, and to reduce, prejudicial and subjective interferences as much as possible.

On this basis various *tests* were chosen. Tests are limited to standardized material and thus largely eliminate subjective influences, at least at the administrative level. Moreover, only such tests were selected as require a minimum knowledge of English and a minimum acquaintance with concepts and symbols of modern white Western civilization. Still, it must be noted and taken into account that all the children of the western Papago communities except a few boarding-school pupils had to be tested in their native language through an interpreter, and about half the eastern group of children also needed an interpreter for some of the tests.

In the final analysis and interpretation of test results, objectivity rests largely on the efforts of the individual analyst to disregard preconceived ideas and to maintain an open mind. This factor of dependence upon the human element operates to some extent in most methods of scientific research. But, used with the necessary caution, tests can often convey useful psychological knowledge of greater objectivity in a shorter time than other methods, even under standardized conditions.

Since personality is complex and shows close interdependence of various traits and qualities of which one test would reveal only one part of one side, several tests were chosen, each of them concerned with a different aspect of personality. In the analysis all these tests were interrelated. In their interpretation they were integrated with historical, geographical, socioeconomic, and cultural facts known about the Papago.

Of the total battery of tests administered, the following have been analyzed, interpreted, and used as a basis for this study: two intelligence tests, the Grace Arthur Point Performance Scale (Short Form) and the Goodenough Draw-a-Man Test; Stewart's Emotional Reponse Test; Bavelas' Moral Ideology Test; a story designed to test concepts of immanent justice and animism; free drawings; Murray's Thematic Apperception Test (Revised); and Rorschach's Psychodiagnostic Test. In addition, the children were given physical examinations. Readers who wish full information regarding the tests, methods of administration, and results obtained from other Indian tribes will find sources of such information listed in the Bibliography. Here it is necessary only to give a short review of the tests, so that the reader may be aware of the potentialities—and the limitations—of the methods used.

The *Grace Arthur Point Performance Scale (Short Form)* is an intelligence test designed for children through the age of fifteen; its score is given as an intelligence quotient (I.Q.). The test consists of six separate parts of the puzzle, maze, and block-design type; one of these was omitted in the final scoring because it was charged with elements of white culture which proved to be incomprehensible and often confusing to Indian children. The greatest advantage of the Arthur test for this study was that it does not require the subject to use language.

The other intelligence test—the *Goodenough Draw-a-Man Test*—was used on children through the age of eleven. In this test the child is asked to draw a man to the best of his ability. Certain items in the picture are scored and evaluated as an I.Q.

In *Stewart's Emotional Response Test*, the child is asked, "Have you ever been happy?" If the answer is affirmative, the tester says, "Tell me about it." Three instances of happiness are requested. Then the child is asked to tell about occasions when he has been sad, afraid, or ashamed; to name the best thing and the worst thing that could happen to him. This test evokes selective associations which are largely limited by the child's actual experiences. It throws light not only upon the range and points of emphasis of these experiences but also upon the emotional attitudes of the child toward various situations, persons, and objects and the importance and kind of the role which they admittedly occupy in his mind.

In *Bavelas' Moral Ideology Test* the child is asked, "What could a boy (or girl) of your age do that would be a good thing, so that someone would praise him (or her) or be pleased?" and "Who would praise him (her) for doing it?" He is also asked, "What would be a bad thing to do, so that someone would blame him (her) or think badly of him (her)?" and "Who would blame him (her) for it?" Each question is repeated at least three times. The answers give information about the most common official moral standards of a group and, to some extent, the range of variation. The test also shows children's attitudes toward persons of their environment in their disciplinary role (i.e., as rewarding or punishing agents) rather than as people associated by the child with various emotions, as indicated in the Emotional Response Test.

The *story of the stolen melon and the ax* also deals with moral concepts. The child is told a story about two boys who steal a melon. One of them is punished on the spot. The other gets away but later cuts his foot with an ax. Four questions are asked: "Why do you think Paul's foot was cut?" "If Paul had not stolen the melon, would he have cut his foot?" "Did the ax know that Paul stole the melon?" "Does this happen only in stories or does it really happen?" This story was modeled on those devised by Piaget and others in order to reveal (1) whether a person's moral concepts contain a belief in "immanent justice," i.e., whether he thinks that misdeeds are inexorably followed by punishment through a justice other than that instituted by man; and (2) whether an object, like the ax, is believed to be animated and capable of thinking, feeling, and acting. It has been found that very young white children have both beliefs to a high degree and that each belief decreases as the child grows older. Thus the test gives information about a specific aspect of the personality which is interesting because of its cultural implications.

Two tests were used in which the child is asked to interpret standardized material so vague that he will "project" his own personal situation and character into it in carrying out instructions:

In *Murray's Thematic Apperception Test (Revised)* the child is shown a series of pictures which allow an almost unlimited variety of interpretations, and he is asked to tell a story about each picture. It is assumed that the child projects more or less of his conscious and subconscious emotions, attitudes, and experiences into his stories.

In *Rorschach's Psychodiagnostic Test* a sequence of standardized and meaningless "ink blots" is shown to the child, who is free to give as many interpretations of each whole blot or parts of it as he chooses. The test gives a complex picture of the basic personality and includes information about mental capacities and efficiency, emotional attitudes and drives, the balance of personality factors, and the defense mechanisms adopted against outside pressure or inner conflicts.

The Papago children were also asked to make *free drawings* in water color of any subjects they chose. Each child so tested was asked to draw eight pictures, which were analyzed for implications as to the degree to which Papago children have been influenced by white material culture.

TABLE 1

NUMBERS OF PAPAGO CHILDREN FROM TWO RESEARCH AREAS WHO TOOK THE VARIOUS TESTS

Test	Eastern Papago	Western Papago
Arthur	95	47
Goodenough	47	24
Emotional Response	95	54
Moral Ideology	90	54
Melon and Ax	95	54
Free drawings	88	42
Thematic Apperception	42	21
Rorschach	74	43

As noted in the Introduction, it was not possible to give each test to every child. The numbers of children from the two Reservation areas who took each test are shown in Table 1.

Analysis and interpretation of test results have been made with reference to averages obtained for each tribal community studied. In these averages boys and girls in the age range six to eighteen have been included. Use of the same method for four other Indian tribes and in part also for a group of midwestern white children gives the basis of comparison necessary for the discernment of tribal characteristics.

Averages have also been obtained for each sex separately. Furthermore, in order to ascertain possible developmental trends, the test results have been analyzed with regard to age as well as sex groups. The sometimes unequal age distribution, the relatively small number of children tested, and uncertainty about exact birth dates, particularly in the western Papago communities, made

125 it desirable to establish the following age groups: six to seven, eight to ten, eleven to thirteen, and fourteen to eighteen.[1] However, in the following chapters age and sex differences are noted only when they seem particularly significant.

121 128 No one is an individual unit moving independently through life. The influences of other people and their reactions to him will, to a greater or smaller degree, determine the course and strength of certain of his own psychological reactions and evoke new psychological equivalents for new situations of social contact.

Therefore, what we usually consider as characteristics of a group of people (*i.e.*, those qualities more or less common to all members beyond their distinguishing individualities) will probably not be limited to superficial modes of expression and certain manners of behavior. This study is planned to do more than report a dialect or a particular way of eating or dressing; we have tried to uncover specific attitudes and reactions deeply rooted in the personalities.

Since the interest of this study is in the Papago not only as human beings or as individuals but also as Papago—and indeed the practical problem of the Papago minority as it exists in the state of Arizona today alone would justify such interest—the report of the psychological analysis will be concerned primarily with those attitudes, reactions, and personality traits which seem to belong specifically to the Papago tribe and to distinguish it from other Indian tribes and cultural groups.

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[1] The same age groups were used for all the tribes studies in the Indian Educational Research Project except the Sioux.

Chapter XIII

HEALTH AND PERSONALITY

BEFORE judging a person's behavior and trying to trace its sources to certain conditions of his life or events of his past, it is necessary to find out first whether he is in good bodily health, as his attitudes may be determined or greatly influenced by physiological disturbances. Irritability resulting from acute or chronic diseases has a significance quite different from psychogenic irritability—for the individual who shows the reaction as well as for the people around him. 121

For a psychological analysis of a group of people the same holds true. It is conceivable, for instance, that a well-fed group may react to certain stimuli differently from an undernourished group. Therefore, medical examinations were considered a part of this personality study of Indian children. 121 14

Limited time and means precluded examinations more thorough than the routine health surveys of school children, hence biochemical methods, X-ray, basal metabolism tests, and the like could not be used. Obviously such a superficial exploration of health conditions also certainly missed many existing psychosomatic relations.

The physical examinations given the Papago children determined their weight and height, state of nutrition, vision, blood pressure, and pulse rate. Skin, eyes, nose, mouth, and throat were inspected, and heart, lungs, and abdomen examined. Deformities were noted. Special attention was given to symptoms of vitamin deficiencies, such as bleeding and ulcerated gums, fissures at the corners of the mouth, and obvious malformations of the bone structure typical of rickets. The neurological examination was limited to exploration of muscular tone and strength, of reflexes and of co-ordination. Because Papago children dislike to undress completely in front of other people, examination of the genitals was omitted. All medical examinations were given at the schools. Incidentally among the Papago, regular school attendance is not an indication of good health. A child's whim, the visit of a distant relative, a trip to the trader's, or the temporary need of help in the fields or at home is reason enough

14 for most parents to keep their offspring out of school. Thus, it is probable that the picture of average health obtained from the limited number of children available for examination would not have been essentially modified by including the children absent from school.

Had the great number of children who were away in the cotton fields been included in the results, the figures for common cold, bronchitis, and skin infections like impetigo would probably have risen, for it is known that such disorders are favored by the living conditions in these places. But, as with school attendance, absence for work in the fields has little connection with general health.

No epidemics of childhood diseases were reported during the period of the health survey, but, without question, single cases of acute illness in absentees escaped attention.

One hundred and thirteen children (58 boys and 55 girls) were thus examined. Of these, 73 lived in the eastern area, and 40 in the western. Table 2 illustrates the principal results obtained from the whole Papago group.

164 146 One impressive finding of the health examinations was the exceedingly small number of children in perfect health. Further, almost half the children (43.4 per cent) appeared underfed—were thin or emaciated. About the same percentage showed signs of malnutrition (i.e., vitamin deficiencies, etc). This figure is lower than it might have been if, with the aid of X-ray examinations, less manifest bone malformations caused by rickets had become evident. The great number of children with marked irregularity of the teeth leads to the suspicion that vitamin D deficiency may affect a greater number of children than those who displayed obvious signs of rickets in ribs and long bones (the only indications of vitamin D deficiency used in this study).

164 The next most common abnormality found was enlargement of tonsils. If to this figure are added those cases in which tonsils had been removed, the percentage of children who were suffering or once had suffered from chronically diseased tonsils rises from 41.6 to 59.3 per cent.

Over a third of the children showed symptoms of an acute cold, such as coryza, sore throat, and signs of bronchitis. This is rather a high figure but not surprising if it is remembered that the examinations took place from December to February, when nights are cold even in southern Arizona. In the mornings the children often climbed stiff and shivering from the school bus and rushed into the school to crowd around the stoves. Only rarely did they wear sweaters or coats; most of the boys wore the same denim overalls and thin cotton shirts as in the hottest summer months, and the girls had on light cotton prints over rayon panties and (occasionally) a slip.

The incidence of other disorders does not seem remarkable. The children's teeth were bad, no doubt, but such findings referred mostly to milk teeth, while only a relatively small percentage of older children showed dental decay. 164

However, certain chronic diseases were apparent which, because they are contagious, would constitute a grave danger for any community, even though the incidence were comparatively low. In Papago communities water is scarce or can be obtained only with difficulty, and frequent washing of hands, body, and kitchen utensils is a luxury. Particularly in wintertime, most persons sleep close together in one room, usually in the same clothes worn during the day. In such communities the significance and danger of communicable diseases is commensurately heightened. [515]

TABLE 2

FINDINGS OF MEDICAL EXAMINATIONS
(In Percentages of Total Number Examined) [146]

Condition	Total Group	Eastern Children	Western Children
Good health*	7.1	8.2	5.0
Good nutrition	56.6	49.3	70.0
Fair nutrition	25.7	34.2	10.0
Poor nutrition	17.7	16.4	20.0
Malnutrition†	44.2	50.7	32.5
Impaired vision	6.2	8.2	2.5
Active trachoma	17.7	17.8	17.5
Arrested trachoma	16.8	19.2	12.5
Irregular teeth	51.3	54.9	45.0
Caries	33.6	39.7	22.5
Enlarged tonsils	41.6	35.6	52.5
Removed tonsils	17.7	27.4	
Swollen lymph glands	23.9	21.9	27.5
Suspected tuberculosis (lungs)‡	9.7	8.2	12.5
Valvular heart disease	2.6	2.7	2.5
Impetigo and ringworm	7.1	6.8	7.5
Colds§	35.4	30.1	45.0
Children examined (no.)	113	73	40

* No impairment except occasional irregularity of teeth.

† Evidence of marked vitamin deficiency, such as rickets, bleeding or ulcerated gums, fissure at corners of mouth (see p. 178 for discussion of nutritional states).

‡ As suggested by auscultation and percussion.

§ Acute colds with such symptoms as coryza, sore throat, or bronchitis.

For a number of years tuberculosis has been recognized as threatening the very survival of the Indian population of the United States. Among the Papago children studied, almost 10 per cent were suspected of tuberculosis of the lungs. If these suspicions were verified by means of longer observation, 164 X-ray examinations, and laboratory tests, they would certainly be cause for alarm. Though the incidence of tuberculosis among Papago children is unknown, in view of the number of adult Papago who fill the sanatoriums of Tucson and Phoenix (and who are recruited only from the few who submit to white medical treatment) even the rate of 10 cases per 100 children may be conservative.[1]

Another disease usually considered a curse of the Indian is trachoma, a contagious disease of the eyes which may lead to impairment of vision and, occasionally, even to blindness. Many Papago old people are afflicted, but since the discovery of treatment by sulfa drugs, which can easily be administered at school, the incidence of trachoma has dropped steeply among school-age children all over the Reservation. Thus only 17.7 per cent of the Papago children studied were suffering from active trachoma, while about the same percentage showed the disease in an arrested state.

There are other Indian tribes, like the Hopi, among which this disease has been much more nearly eradicated. The Papago, who leave the Reservation in great numbers to work for several months each year in the cotton fields where organized health service is lacking, are much more exposed to reinfection than those tribes which, firmly settled, stay a lifetime in their reservation villages.

Impetigo, a staphylococcus infection of the skin, was until a few years ago a widespread disease among Papago children. The writer recalls that even in 1941 on field trips and in the clinic of the hospital at Sells she saw a large number of children literally covered with impetigo sores. Owing to the very active campaign against impetigo undertaken by the health and school authorities of the Reservation and to the co-operation of all day-school teachers in its treatment, it is now rarely found among children of school age, though every year the return of a large number of children from the cotton fields results in a new outbreak. Among the children examined in this survey who had remained at home or who were in boarding school, only 7.1 per cent had impetigo. In all cases the disease was limited to one or a few sores. Though even a rate of 7.1 per cent may appear high, it constitutes a tremendous improvement over previous conditions.

164 These are the essential findings of the physical examinations used in the
164 survey. Before reviewing them, it may be of interest to note that none of the
157 children volunteered complaints about their health. Nor did they come forward, when asked, with tales of headaches, upset stomach, or previous diseases. All of them said point-blank that they were and always had been perfectly healthy. Recalling the attitude of the average adult Papago at the Sells hos-

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[1] The high rate of death from tuberculosis among the Papago as a whole is noted in chap. vii.

164 157 pital—quiet, dignified, and uncomplaining even when in acute pain—and remembering his reluctance to give information about his illness, the writer feels that the children responded according to the same pattern. That this attitude is not identical with a lack of concern about health we shall see later when discussing the results of the psychological tests.

755 When a California faith healer visited the Papago Reservation in 1941, large crowds from all sections came to see her and to be cured by her, in spite of the opposition of the Catholic church. Like Papago medicine men, who do not ask questions but by magic means acquire knowledge about the cause and course of an illness, this woman did not ask for information; the Papagos apparently thought she already knew the history of their illnesses through an inherent supernatural power. Here we get an inkling of the deep-seated difference between Papago reactions and attitudes and those usually found within the area of white culture.

164 We also see how our knowledge about these people would fall short if we relied only upon direct information. According to such information, all the children who were examined never had been sick or, at least, never had felt sick, though a number of them were known to have been treated by white physicians for various ailments. Therefore, if we wanted to establish, beyond the crude findings of the physical examinations, how far these children are in fact resistant to physical hardships and exposure, we should have to resort to statistical data furnished by the health service and based upon medical observation over a long period. At present this is not possible, since a relatively small part of the Papago population asks for white medical attention. The writer can only say that, during her stay on the Reservation as a field physician, the reported and observed number of school children with acute respiratory disorders and the seasonal incidence of the various childhood diseases impressed her as rather high.

The actual findings about the health of Papago school children are not too encouraging; they are far from the ideal standards of physical health postulated by modern science. Disregarding the tuberculosis suspects, no chronic debilitating diseases were prevalent. But the fact that almost half the children were more or less undernourished and about the same number showed signs of vitamin deficiencies seems ground enough for concern, particularly if we also take into consideration the physical hardships and exposures to which these children normally have to submit. That we cannot count upon an automatic increase of resistance in response to this constant exposure is evident from the high incidence of acute respiratory diseases in Papago children, especially in winter, and from the ravages of contagious childhood diseases like

164 measles and whooping cough, which frequently end in pneumonia. We may assume that what has been established experimentally for human beings and animals in general applies to Papago children: namely, that undernourishment tends to increase susceptibility to infections and that vitamin deficiencies may favor or produce inflammatory or degenerative conditions in mucous membranes, skin, and nerves.

146 The average Papago diet is extremely monotonous and limited in its main components (see chap. iv). This statement, based upon occasional observations and general impressions, is substantiated by the results of a study of Papago food habits made in 1942 by the United States Bureau of Indian Affairs and the University of Chicago. The three villages in which food habits were analyzed were not included in the present research; but they are communities embracing three levels of typical economic status and acculturation, so that the applicability of the findings to the whole Reservation seems reasonably certain.

In the course of the diet study, the investigator (Emma Reh) listed sixteen foods used during an average week in the meals of a poor Papago family and twenty-seven items found in those of a rich family.[2] Several varieties of beans, wheat flour, corn, coffee, and sugar, with the occasional addition of meat in the prosperous family, constituted the bulk of the food. An analysis of the nutritional value of the average Papago diet (made by Michel Pijoan, M.D. on the basis of Miss Reh's findings) revealed that the average amount of calories ingested was sufficient but that there was a moderate insufficiency of calcium and a marked insufficiency in vitamins A and (particularly) C. Furthermore, only 21 per cent of the protein consumed was derived from animal sources, suggesting deficiency of some of the most valuable types of proteins.

Part of these findings were corroborated in 1943, when, independently of the above-mentioned research, examination of twenty-eight Papago school children revealed a pronounced insufficiency of ascorbic acid (vitamin C) in their diet. It was stated that "in some cases . . . certain stigmata of early scurvy can be found, such as bleeding gums, hemorrhagic diatheses about the ankles and heels, and loose teeth."[3]

All these findings suggest that Papago diet, which is largely dependent upon the limited agricultural resources of the desert and upon cultural traditions, can indeed be considered inadequate, especially for children, who require 146 more high-grade proteins and more vitamins than adults.

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[2] See Emma Reh, "An Economic Study of the Papago Indian Reservation, Arizona."

[3] Michel Pijoan, C. A. Elkin, and C. O. Eslinger, "Ascorbic Acid Deficiency among Papago Indians," *Journal of Nutrition*, XXV (1943), 444.

Another factor which may aggravate the conditions of undernourishment and malnutrition produced by the limitations of Papago diet is perhaps to 146 be found in the general attitude of adult Papago toward their children. Recog- 858 nition of the difference between the needs and reactions of the child and the adult, as far as it is determined by such factors as the physiological process of growth, does not seem to be part of the Papago pattern of training and guidance of children. This attitude seems to be fundamentally different from that predominant in modern white civilization, where a child is a being in development, an organism that has not reached its full strength and maturity and must be guided toward this goal even against its will. A child who prefers pickles to spinach will nevertheless have to eat more spinach. In front of her son who is crying angrily because he had to leave a toy and eat his oatmeal, the white mother stands serene and without feelings of guilt, convinced that she is acting for the child's own good.

The Papago do not ignore the facts of physiological maturity or immaturity. But, as in the art of the Middle Ages, where the child represented in his mother's lap looks like a miniature grown-up, the Papago child seems to be considered a small-sized man or woman, sexually immature but otherwise organically undifferentiated from the fully grown.

This matter will be dealt with at greater length in later chapters; here we are interested only in the effect of this attitude upon the children's health. The little men and women enjoy great freedom as to what and how much food they choose to eat, almost as soon as they are weaned from their mothers' breasts. Unwillingness to eat, a preference for a certain dish, or a refusal of others is to a great extent respected and indulged. In many cases this practice means a further restriction or increased imbalance of Papago diet—a restriction which favors undernourishment and malnutrition. In small children it often causes serious digestive disorders which play a considerable role in the [165] high infant mortality (estimated at 258 per 1,000 live births as contrasted with 40.4 per 1,000 live births for the country as a whole). The right of self-determination seems to go still further. As soon as children are able to express their wishes, they are asked whether or not they desire medical treatment when they are ill. If they refuse to submit to treatment in spite of attempts at friendly persuasion, the matter is usually dropped, however grave and dangerous the illness. Probably there is a direct connection between this attitude and Papago magic beliefs and fear of the dead. Its influence upon the children's gen-

146 eral health, upon mortality and the spreading of diseases, should not be underestimated.

858 With these considerations we have approached an area where Papago personality and psychological reactions intimately merge with and influence the state of the physiological organism. We shall now proceed to analyze the children's attitudes and responses toward their human and nonhuman environment. Then we may understand more fully the problems of physical health as they exist for the Papago and the medical problems and responsibilities which arise for the white administrators of this minority group.

Chapter XIV

THE INTELLIGENCE OF PAPAGO CHILDREN

KNOWING a people's mental approach to problems, the direction of their intellectual interests, and their capacity for organization of thought is a most important factor in understanding their personalities, because all human activity, in so far as it does not concern strictly biological matters, implies intellectual activity and shows its imprint. 121

In human contacts, if we are not to bring harm to others and to ourselves by requiring inadequate tasks or by misinterpreting incapacity as unwillingness, we must take into account degree and range of intelligence. In daily life this factor plays a considerable role in the establishment of interpersonal relations. Judgments of "intelligence" are usually made about the most casual acquaintances and are often tainted by vague or well-defined personal likes and dislikes: to dub a person "stupid" is frequently only to say that his opinions or way of life differ from one's own. In the complex of prejudices held by white persons against minorities, "inferior intelligence" has been one of the favorite themes.

During the past decades numerous tests have been devised which, by submitting the tested person to standardized conditions, try to eliminate subjective influences and to obtain comparable values for the degree of intelligence. Since these tests were standardized on white individuals and are chiefly concerned with those areas of mental activity which are considered of greatest importance and desirability in white Western civilization, they do not produce an absolute scale for intelligence but must be interpreted in relation only to those intellectual traits which they are designed to test. Even though such tests avoid personal subjective interferences, they are still open to varying degrees of cultural subjectivity. 121 125

There are, however, several tests which try to determine an "intelligence quotient" by the way in which the subject performs certain manual tasks. Being nonverbal and using material that is reasonably culture-free, these tests

121 are evidently the best for use with individuals of a cultural background differ-
125 ent from that in which the tests were standardized. Both intelligence tests selected for the research on Indian education—the Grace Arthur Point Performance Scale and the Goodenough Draw-a-Man Test—belong to this group.

The results obtained from Papago children with the Grace Arthur test show
125 a considerable difference in the average I.Q.'s of the western and eastern dis-
153 tricts studied. The test performance of the eastern children was on the average about equal to that of the white children on whom the test was standardized; the average I.Q. of the white children was 102.5; that of the eastern Papago children, 99.4 (see Table 3). In comparison with children of other Indian communities included in the research, the eastern Papago occupy exactly the median place. The much lower I.Q. of the western Papago children—86.9—puts them and one group of Navaho at the lower end of the scale.

Though this striking difference may be due partly to chance operating in
153 the composition of the two Papago groups, other factors which may be influential should be taken into consideration. It is perhaps not a coincidence that, among three Navaho groups, the one with an I.Q. still lower than that of the western Papago was almost entirely composed of children who had never been in school. The majority of the western Papago children who took this test were listed as attending day school, but it is known that attendance is usually much more sporadic than in the eastern part of the Reservation. It is by no means an exception to hear of absences from school lasting several months, even years, and children often start school at the age of twelve or fourteen, attending perhaps for a total of one or two weeks during the whole school year. All these children are, however, listed as attending school. School training as a factor possibly influencing the results of the Grace Arthur test cannot therefore be disregarded in interpreting the test results, especially since the same factor is found combined with similar test results in another Indian group.

However, not only the western children's limited acquaintance with the handling of puzzles and mazes, such as are used in the Grace Arthur test, may have played a role in lowering the I.Q. The fact that western children are much less conditioned by previous training to give attention to and to be at ease regarding tasks which white persons require from them may have brought down the average I.Q. of this group. Moreover, it should be remembered that the western communities from which the children were chosen are distinguished from those of the eastern area by their particular resistance to white influence and especially to the introduction of schools. It is not known exactly how much the emotional attitude with which a person enters a test situation may influence the results of an intelligence test.[1] In the evaluation of an average I.Q. obtained from large numbers of individuals, it may usually be assumed that the various attitudes will neutralize each other. In the case of the western Papago, however, it is possible that resistance to whites may have outweighed the more favorable attitudes.

Although these two factors of possible negative influence—limited school experience and emotional resistance—must be kept in mind, it is impossible to determine clearly whether and how far they are responsible for the low average I.Q. of western Papago children.

With certainty a "racial factor" may be excluded. The much higher average I.Q. of the eastern Papago children and the wide range of intelligence quotients found in the various Indian tribes studied, one of which shows an average considerably higher than that of white children, seem to be sufficient proof against such an assumption.[2]

There are, however, still other differences between the two Papago areas, besides those concerning schools and attitudes toward whites, which may have influenced the course of their intellectual development. As noted in Part I, the western part of the Reservation is extremely arid and exposed to sandstorms and droughts. Living conditions are therefore particularly hard, and the fight for survival apparently requires more effort and brings more setbacks and disappointments. The average economic conditions are correspondingly less favorable than those in the eastern districts.

Furthermore, the life of a western Papago child is relatively simple. The tasks usually required from him are of immediate reality and urgency. The fiestas and native ceremonies, which have no great complexity of symbols and rites to stimulate formal trends in his mind, will mean to him chiefly complete relaxation. Hence, both work and relaxation are of a sort which normally do not require the kind of mental activity needed for the solution of puzzles or the tracing of mazes. In this desolated spacious desert area, where the enemy is mainly poor soil and drought and much less the pressure of outside groups, what is needed and demanded is direct and careful planning, the organization of a relatively limited number of important phenomena into a meaning, and attention to immediate necessity.

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[1] Experiments recently accomplished with another test (the Rorschach), in which the subject is submitted to suggestions inducing specific moods, have shown that different emotional reactions seem indeed to have a bearing on test results. Depression, for example, seems to slow down the performance; apprehension appears to reduce the results to a more primitive pattern (see Kate Levine, Joseph R. Grassi, and Martin J. Gerson, "Hypnotically Induced Mood Changes in the Verbal and Graphic Rorschach," *Rorschach Exchange*, October, 1943).

[2] See Laura Thompson and Alice Joseph, *The Hopi Way*, pp. 100–101.

THE DESERT PEOPLE

153 184 In times of relaxation, of prayer for or rejoicing over good harvests and rain, vagrancy of thought going out into daydreams or songs is apparently not only permissible but respected as being close to nature and its spirit. Western Papago who are able to solve complex formal and organizational problems perform such tasks through mental activity which seems to lie outside that normally required for their daily life.

153 184 177 The eastern Papago communities, on the other hand, have been for a long time exposed to outside influences. In the old days Apache raids were comparatively frequent and demanded constant watchfulness and readiness for defense. There are now other elements that influence the eastern way of life: two Catholic missions and schools, one Presbyterian mission and school, one government school, and, only ten to twenty miles away from the several communities, the Reservation headquarters, which is also the seat of the tribal council and court. Mexico, "just across the mountains," is frequently visited. Thus, life in this area has certain more complex and formal aspects, the mastery of which stimulate mental activity beyond the simplicity of the West, into the direction of greater intellectual alertness and greater ability to differentiate and to organize complex tasks.

153 Making a decision as to the actual effects of these factors on the I.Q. of Papago children seems obviously impossible, particularly if it is to be based on the results of one test. However, the other intelligence test used in the research, the Goodenough Draw-a-Man, has given findings which to a degree support the considerations discussed above. According to this test, the average I.Q. of Eastern Papago children is 108.5, that of the western Papago 103.6 (see Table 3). The average I.Q. achieved by the Papago children of both areas on the Goodenough test is higher than that obtained by white children on whom the test was standardized (100.0) and by a group of white children from a midwestern town (101.2).

151 153 The mental capacities taken into account for the calculation of an I.Q. in the Goodenough Draw-a-Man Test are apparently different from those playing a role in the Grace Arthur test. The old fame of Indians as scouts—a fame which has repeatedly been confirmed in the recent war—indicates alertness and attention to significant details, the chief traits scored in the Goodenough test.

The following incident may illustrate the nature and degree of Papago children's gift for observation. One of the Reservation field nurses took a group of small Papago children for a few hours to the Agency seat for medical examinations. Some time later a teacher asked the children to draw pictures of the hospital. Almost all showed certain details which appeared to the teacher

and the nurse, who knew the hospital well, to be out of place or even invented. 151
On their next trip they checked these details and found to their surprise that 153
the children had been correct.

In this case the specific way of life in which the children are trained has apparently stimulated a particular mental activity and furthered its development. It cannot be assumed by analogy that the same factor played a negative role in the Grace Arthur test, but the results of the Goodenough nevertheless seem to support this possibility, because children of actual dull normal intelligence (as an I.Q. of 86.8 would imply among whites) could hardly achieve, even through specialized training, a nonmechanical skill of detailed observation to the degree shown by the western Papago children in the Goodenough test.

TABLE 3

AVERAGE I.Q.'S SCORED BY PAPAGO CHILDREN OF TWO AREAS ON TWO INTELLIGENCE TESTS

AREA	AVERAGE I.Q. Arthur Test*	AVERAGE I.Q. Goodenough Test†
Eastern	99.4	108.5
Western	86.9	103.6

* Children aged six through fifteen years. Source: Robert J. Havighurst and Rhea R. Hilkevitch, "The Intelligence of Indian Children as Measured by a Performance Scale," *Journal of Abnormal and Social* Psychology, XXXIX (1944), 427. If only the children of six through eleven were included, as in the Goodenough test, the Arthur I.Q.'s would average 99.7 for the eastern children and 87.5 for the western.

† Children aged six through eleven years. Source: Robert J. Havighurst, Minna Korol, and Inez Pratt, "Environment and the Draw-a-Man Test: The Performance of Indian Children," *Journal of Abnormal and Social Psychology*, XLI (1946), 50–63.

With regard to the supposedly negative influence of the western Papago attitudes toward whites, it should be noted that the situation during the administration of the Goodenough test was actually less provoking than that of the Arthur. The latter was given to each child alone by a white teacher unknown to him; the Goodenough test was administered to groups of varying size by a teacher or by an anthropologist, both of whom were familiar to the children at least by sight and by sporadic contacts.

Later it will be shown that still another test (the Rorschach) supplies information about mental activity and that its results seem to agree with the assumption that specific conditions may have lowered the I.Q. of western Papago children on the Arthur test.

153 However, let us examine first the results of still other tests, which are not concerned with the purely intellectual side of personalities. If we know more about the children's emotional reactions, the aims and values influencing their behavior, and their average personality structure in its entirety, we may be able to approach the problem of intellectual capacities from a different angle.

So far it is clear that in average mental ability as indicated by tests, the Papago groups studied reveal differences between one another, on one hand, and between themselves and white children, on the other hand, and that specific differences seem to be tied up with specific tests. This casts some doubt on the wisdom of accepting the test results at face value and suggests certain hypothetical explanations, of which the influence of a different way of life appears to be of primary importance. If other tests reveal that such influence is deep enough to color other sides of the personalities as well, such explanations will have greater plausibility.

Chapter XV

SOME EMOTIONAL PATTERNS OF PAPAGO CHILDREN

WE TURN now to other factors in the personalities of Papago children. The reader will recall from chapter xii that one of the tests (Emotional Response) is designed to discover emotional patterns by direct question and answer; the child is asked to tell about occasions when he was happy, sad, angry, afraid, or ashamed and to describe the best thing and the worst thing that could happen to him. Normal human beings, when asked directly to tell strangers about certain emotions, usually tend to be evasive in their answers, particularly if the questions evoke associations of sacred or intimate nature. But, when the evasive component is taken in account, such answers can be of great value for the discernment of personality structure. What is openly admitted varies according to the character of the individual because it leaves him a certain freedom of choice; besides, it reveals those roads of noncommittal safety which he thinks are sure to receive general approval. Thus, even if simple, direct questioning does not reveal very much about the true emotional background of a normal person's behavior, answers to such questions do show which areas of emotional experience appear to the subject to be safe and permissible to describe. 153 121

When a person who is asked by a stranger, "Tell me about a time when you were happy," answers, "I was happy when I was at the movies," it is quite possible that he really experienced memorable happiness there. But, without further explanation, it is not clear what was the immediate reason for his emotion or whether there might not have been much more significant occasions of happiness in his life which he does not want to communicate to a stranger. In an average case it may be inferred, however, that "movies" have a certain pleasant association for him, that they fall into his range of experiences, and that he considers them socially legitimate pleasures.

What an individual considers socially legitimate emotions, as well as his

153 121 selection of specific instances, may be clues to the understanding of his personality, because the nature of admitted and accepted emotional outlets reveals some of the tracks into which, under ordinary circumstances, a person's behavior is socially directed. In the analysis of an individual personality such findings have a meaning not so much by themselves as in correlation with the results of other, more complex examinations. In the analysis of the average personality structure of a group of people, knowledge of openly admitted pleasures, fears, and reasons for sadness, anger, and shame has a greater value by itself, because it may show the extent and the character of common areas of emotional experiences and behavior tendencies and thus contribute insight into the psychological cohesion of the group.

Moreover, in group interrelations, it seems to the writer that the face value of emotional and moral standards as admitted by most members of a group is largely responsible for what to an outsider appear as "group characteristics." It represents the kind of psychological evidence on which he bases his judgments and prejudices as well as his behavior toward members of the group.

153 The answers of Papago children to questions about occasions when they were happy, sad, afraid, angry, or ashamed were highly evasive, but the responses did not appear to be deliberately invented or calculated either to please or to challenge the tester. All the answers were short and given without elaboration or explanation. Apparently, whenever the children felt objection to the whole test or parts of it, they did not respond at all instead of groping in their minds for a suitable answer. Among these were children with high and low I.Q.'s alike. Only a small proportion of the children—9 per cent in the western area and 10 per cent in the eastern—rejected the entire test; but a much higher percentage rejected questions about one or several specific emotions. The number of eastern children who made partial rejections was about twice that of western children making such rejections.

[125] In view of the resistance which in chapter xiii was assumed to play a part in contacts between western Papago and whites, these findings would appear incongrous, if consideration were not given to a new factor of influence inherent in the test itself. The Emotional Response Test is verbal and requires at least a certain amount of understanding and speaking knowledge of English if given in this language. The test was given almost exclusively in English in the eastern communities, while the western children were tested in Papago with the help of interpreters.

Considering the inhibitions a child may feel when he is asked to tell about his experiences in a language which he has not mastered, the differences in the number of rejections found in the two areas may indeed be based mainly on such mechanical difficulties. This is the more probable, since, aside from the difference in total numbers of responses, the two geographical areas agreed completely in the rejection of specific questions. Questions about shame brought the fewest responses, anger a few more, with sadness next higher on the scale. Fear and happiness were most frequently described. Later we shall return to the probable significance of this trend common to all Papago children.

HAPPINESS

According to Papago children themselves, they are made happy most of all by play and by rodeos, fiestas, parties, and the celebrations of various holidays (see Table 4). The next most important sources of happiness are trips and journeys and gifts of clothes, food, toys, and money received from relatives, friends, or just "anybody."

TABLE 4

Principal Sources of Happiness as Described by Papago and by White Children (Rounded Percentages of All Responses)*

Source	Papago	White
Play and amusements	30	17
Property (receiving gifts and having property)	16	27
Fiestas (native and Spanish-American)	15	..
Trips	13	11
Holidays (white)	8	12
Work	8	2
Personal achievement	1	10

* Data in this table and in Tables 5–10 are from Robert J. Havighurst, "A Comparison of American Indian Children and White Children by Means of the Emotional Response Test" (MS).

The general pattern of happiness among white children of a midwestern town is similar but there are some striking differences between the two. The pleasant significance of festive occasions seems to be markedly less for white children; that of receiving gifts and having property much more. Play and amusements, though apparently occupying an important enough place in white children's minds, seem to receive less attention than from the Papago, particularly the girls. The most striking difference, however, lies in the area of personal achievement, which for white children has a rather strong pleasure-producing function; for Papago children, practically none.

In a comparison of the western and eastern Papago we find the same overall trend, with a slight shifting of pleasure values (see Table 5). In the west there is a strong accent on fiestas and tribal ceremonies which appears to be partly replaced in the east by parties and dances, competitive games like basketball, and the celebration of white American holidays. In the east, church and school receive more attention, whereas trips and journeys, the receiving of gifts, and the possession of property, particularly of food, are more often remembered as occasions for happiness in the western districts.

Recalling what is known from observation of Papago ways of life, as detailed in Parts I and II of this study, we find that observed facts and the results of the test support each other. These are the children, as in moments of happy recreation we see them on the Reservation—the candy-lovers and spenders of nickels at fiestas, the indefatigable dancers at native ceremonies and church parties, and enraptured onlookers at rodeos, the young riders at roundups, the smiling occupants of wagons on their long, dusty trips to Magdalena or the cotton fields. We see them in immediate naïve response to the joys of festive occasions which punctuate the sequence of working days, rejoicing in gifts which satisfy their hunger or make them look pretty but caring little for the pleasure and prestige of owning property, and still less about ambitious achievements which might single them out from others.

TABLE 5

PRINCIPAL SOURCES OF HAPPINESS DESCRIBED BY CHILDREN OF TWO PAPAGO AREAS (ROUNDED PERCENTAGES OF ALL RESPONSES)*

Source	West	East
Play and amusements	17	27
Property and gifts	22	13
Food	7	3
Money	1	1
Fiestas and ceremonies	18	4
Holidays (white)	7	9
Trips	16	11
School	4	11
Church	1	3

* For source of data see Table 4.

In the old Papago culture individual superiority and power were not thought of as the result of patient and planned labor or connected logically with personal merit. They were a gift from the supernatural,[1] bestowed in a dream to those esteemed worthy in a mystical sense. In the immense desert where the groups of Papago were scattered, small in the greatness of nature and exposed to its attacks, such a belief was at once humble resignation and hope in miraculous salvation.

Into such an atmosphere the concept of personal achievement did not even

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[1] See Ruth Underhill, *Social Organization of the Papago Indians*, pp. 197 and 209, and the same author's *Singing for Power*, *passim*.

enter. Duties had to be done—constantly and well done—but results could be 153
obtained only by co-operation, not by the strength or inventiveness of the individual alone. The more gifted and the uncommonly successful were looked upon with friendly appreciation or with awe as being favored by the supernatural, but they were not admired as self-made men.

Much of the ancient Papago culture and many of its concepts seem to be alive today; and, though numerous old traditions and customs may have broken down, it usually takes more than thirty or forty years to change a fundamental philosophy of life. Thus the children of both areas of the Papago 153
country studied do not show the personal ambitions observed in modern white 177
culture, and reports of their general behavior in school support the findings of the tests. However, slight traces of white influence upon eastern Papago children may be seen in their growing interest in competitive games.

There are still other signs of white influence in the eastern districts, the most important probably being the diminishing attention given to native ceremonies and fiestas which, as Table 5 shows, seems much weaker than in the western districts. Here may be seen the Papago "plasticity" to alien influences—a plasticity arising from their own loosely knit cultural forms, allowing them to take on foreign symbols without crucial difficulties and to fill them with their own spirit.

The differences between the two districts regarding happiness derived from 153
gifts and property are consistent throughout the Emotional Response Test. The western children admit not only greater pleasure from property but also deeper concern about its loss.

"THE BEST THING"

These differences become more evident if we expand our inquiry beyond the area of happy experience to that of openly admitted desire. When the children were asked, "What is the best thing that could happen to you?" the testers expected the answers to give a glimpse of the needs and drives arising from actual conditions of life as they are realized by children. By limiting the request to the "best thing" and at the same time widening the area from the actual experience of the child to desires represented, felt, and seen in the whole surrounding world (including that of adults), this question may register more clearly than selective memory (as obtained with our simple, direct method) the extent and strength of various influences, including the images deriving from models, tales, and teachings.

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For example, western Papago children consider property—especially 556
money—as the "best thing" that could happen to them. It might well be in-

153 ferred that these children remembered few occasions in which they were 556 happy because they had money but that many of them felt the need for it sufficiently to deem possession of it the best thing that could happen. We have learned that, on the average, the western farming area has less favorable conditions of soil and climate than the eastern, and the number of comparatively wealthy cattle owners in the West is negligible. In the West, therefore, the security of having cash with which to buy food and clothing is more needed and sought for. Seasonal wage work in the cotton fields attracts a greater percentage of families from this area than from the East, where wage work (often for the government) seems to be done more often to provide additional comforts than to satisfy vital needs.

TABLE 6

"The Best Thing That Could Happen" as Described by Papago Children of Two Areas and by White Children (Rounded Percentages of All Responses)*

Best Thing	Western Papago	Eastern Papago	All Papago†	Whites†
Property	43	18	31	23
Money	34	9	..	..
Gifts	9	9	..	..
Personal achievement	9	11	9	26
Food	5	2	..	
Meeting social expectations‡	..	23	11	4
School	..	9	5	
Personal goodness		8	4	1
Work	..	6	3	11

* For source of data see Table 4.

† Data for white children are for ages eight to eighteen. Hence, for purposes of comparison, only the Papago children of these ages are included in figures for "All Papago" (col. 4). Thus column 3 does not represent an average of columns 1 and 2, which include children six to eighteen.

‡ "School and school activities; job and employment; work and helping at home; growing up; *all without stress on achievement.*"

Although the desirability of property and money is probably greater in the West because of specific circumstances, the *fundamental* attitude toward money and property in both districts is likely to be very different from that of white children, even if whites and Indians use the same formulations.

Whoever has observed the behavior of an average Papago in possession of cash knows that, at least ninety times out of a hundred, the Papago will spend most of his money at once at the trader's, at a fiesta, or in town (see chap. iii). For him, money's essential value seems to lie in its conversion into pleasure and into the satisfaction of immediate needs. It usually provides prestige only in the form of a particularly beautiful saddle or occasionally of a car, a radio, or a sewing machine; on the average it is not accumulated.

EMOTIONAL PATTERNS OF PAPAGO CHILDREN

The Papago child who mentions money as the best thing thus shows an 153
attitude apparently similar to and often identical with the one who names 556
fiestas, a doll, a horse, or food. Money for him has, as for his elders, the significance of immediate gratification. Here the desires and the needs of an ancient premonetary culture are met with the tools of a recently introduced, alien socioeconomic and cultural system.

After urgent needs have been satisfied, money is used chiefly to obtain the sort of pleasure specific to old Papago culture, i.e., wholehearted and complete relaxation after the tension of work. The fact that the means of attaining such relaxation have changed has already led, and threatens to lead increasingly, to the disintegration of the individual and the group.

Before money played an appreciable role in Papago life, relaxation was 153
found mainly in the common ceremonial gatherings which were regularly 517
repeated between intervals of certain work. At some of these gatherings a 556
number of behavior restrictions were temporarily lifted, and, in the eyes of his people, the individual had wide license to seek personal pleasure. At one of the main ceremonial gatherings—the wine ceremony—wine from the juice of the saguaro cactus played an essential role in inducing the desired relaxation. Becoming drunk to unconsciousness from this wine was seen as a magic device, symbolic of the rain that drenches the earth into fertility. Perhaps in this state of ritual drunkenness, a dream was sometimes hoped for and received.

With the advent of money, pleasure and relaxation which had previously been institutionalized, anticipated for months, prepared for by the whole community, and enjoyed by the individual with approval of the group could be bought by the wage-earner for himself alone and for his near-relatives and friends. What he got for his money was, however, very different from the pleasure his people had been trained for and had delighted in for centuries.

The Papago can buy necessary food, clothes, blankets, and tools on the Reservation, but pleasures as he wants them are not for sale. In the nearest towns, what few opportunities for amusement are available and comprehensible to him—a rare circus performance, a football game, the celebrations and parades of holidays, the movies—are full of the spirit of an alien culture, and he participates in them as an Indian among whites, as a stranger in a foreign country.

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The only pleasure on sale which resembles the one he is used to (and at the 273
same time can make him oblivious to the problems and conflicts arising from 517
new and changed conditions) is alcohol. The sale of alcohol to Indians is 556
illegal, and drunkenness is condemned by the government under whose

273 administration he is living. But the Papago carries in himself the encouraging
153 remembrance of traditional ceremonial sanctions; challenging the law made
by white people, he spends a great deal of his money on drinks bought in
517 town or smuggled across the Mexican border onto the Reservation.

556 Though drunkenness resulting from whiskey or gin gives the Papago pleasure of complete relaxation, and perhaps even dreams, it lacks the assurance and security which derive from the unity of purpose and common approval granted to everybody in the drinking ceremonials. Its magic and religious justification will gradually pale before a growing addiction to the pleasure of drink itself. There is no doubt that with increased wage-earning the number of acts of violence, of disturbed family relations from drunkenness, of Papago men apprehended and jailed for this reason on the Reservation and in town, has steadily risen. We shall return to these facts in chapter xvii, and we shall learn how conscious the children are of them.

Because of the subordinate function of money as a means of prestige and
153 achievement among the Papago, and because of its quite preponderant con-
556 version into a pleasure which, though similar to the traditional relaxation, lacks most of the constructive value of its model, the high rank of money among the best things mentioned by western Papago children seems alarming. This part of the Reservation is the least acculturated to the spirit of modern white civilization. At the same time, it is driven by its economic predicament to make use of the modern white system of wage work. The conditions surrounding this wage work—mainly in the cotton fields and mines—are not such as to further a psychological and spiritual adjustment to white culture. The incorporation of the money concept into the values of western Papago children seems to indicate that this paradoxical and disruptive situation is being increasingly accepted by their group.

In the eastern children's answers, money as the best thing does not occupy a conspicuous place. Here, though wage work is also done in the cotton fields or for the government, the need for it is less vital. While the Papago principle of pleasure is operating here too, and drunkenness is a similar problem, longer and more continuous contacts with noneconomic aspects of white civilization—in the near-by Agency, in the many and more regularly attended schools, in the missions—have apparently brought about change of values. School, the prestige of a "nice" job, work itself, and good character are of some importance in the East but are not mentioned in the West.

153 In both communities personal achievement is valued more highly as a best thing than as a pleasant experience. Perhaps this is partly due to schooling (which itself has competitive elements) and to the models of personal achieve-

ment represented in some dominating Papago personalities. Still, however, such achievement is considerably less conspicuous than in the answers of white children.

SADNESS

Turning toward the so-called "negative" emotions, i.e., those connected with unpleasant feelings, we find that sickness and death together bring more sadness to both Papago and white children than any other one cause (see Table 7).

That death and sickness would probably have a place of importance in the experience of every Papago child is obvious from the high infant mortality rates alone. We have seen in chapter xiii that children are constantly exposed to acute and chronic diseases and that not only childhood diseases but also pneumonia, influenza, tuberculosis, and trachoma are relatively frequent. Besides, sickness seems to be, from an early age on, a foremost theme in the warnings and exhortations given to the child at home.

TABLE 7

Chief Sources of Sadness [illegible]ribed by Papago Children of Two Areas and by White Children (Rounded Percentages of All Responses)*

Source	Western Papago	Eastern Papago	All Papago	Whites
Sickness	23	20	20	17
Death	18	23	24	26
Aggression by others	13	7	9	2
Discipline	11	8	10	3
Disappointments	10	6	10	37
Personal badness	4	14	10	1

* For source of data see Table 4. For age limits of the various groups and relation of columns 1, 2, and 3 see Table 6.

In comparison with death and sickness, all other causes of sadness appear secondary. In the West, sadness caused by punishments and reprimands and by others' aggression, rank next; in the East, personal badness and discipline imposed by adults. The differences between the two areas are not great. White children show little concern about all these categories of experience but are instead much more saddened by disappointments following pleasant expectations.

ANGER AND SHAME

Anger and shame are the two categories of the Emotional Response Test in which the fewest answers were obtained from Papago children. According to the Papago code of behavior, one should not openly express anger, and this fact probably is one reason for the small number of responses to the question

153 about occasions of anger. The question about occasions when a child has been ashamed is usually felt to be quite intimate, because it demands the admission of situations in which the individual must present himself at a disadvantage. It is therefore understandable that Papago children, those of the other Indian tribes studied, and white children from a midwestern town all showed a noticeable reserve in their responses to this question.

In so far as Papago children admit anger, it is most frequently provoked by the aggressive or inconsiderate behavior of others (e.g., "I was angry when John hit me" or "I was angry when Mary threw my doll into the fire"). This reaction is not greatly different from that of the other Indian and white children who were asked the same test question (see Table 8). If, however, we single out the resentment of clearly physical or verbal aggression as it appears in all "negative" emotional categories of the test, we find that in all the Indian tribes studied this type of aggression plays a much more important role than among white children. The Papago are near the lower end of the scale, and we have evidence from their behavior that aggression is relatively infrequent among them. We may, however, assume that they are more conscious of aggression and perhaps at the same time more vulnerable in this respect than white children.

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Awareness of and avoidance of aggressive behavior has always been an essential part of Papago child-training (see chap. ix) as a protective device against the disintegration of the group. Even reactive anger, though justified, should not be admitted. Actual admission of anger by about twice as many eastern as western Papago children is probably a symptom of partial disintegration of the old standards; the code of behavior is breaking down disproportionately to the vulnerability maintained. Open criticism of bad behavior in school and the equally open condemnation of sinful behavior by various missionary methods of education are likely to justify admission of reactive angry feelings more readily than the indirect Papago methods of criticism—joking, teasing, and avoidance.

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Another unpleasant experience which is remembered by Papago children more often than by white children is the discipline received from adults in the form of punishments and reprimands. The Papago usually discipline their children not by corporal punishments or withholding affection or favors but by exhortations, joking, or teasing. Final compulsion to desirable behavior lies in the exemplary conduct of other members of the family group, in praise, in the approval granted by the neighbors, and in the generally acknowledged relative authority of the man over the women and of the older over the younger.

EMOTIONAL PATTERNS OF PAPAGO CHILDREN

As previously indicated, there are few restrictions other than that of co-operation within the working group of the household, which starts only gradually after the children have been accustomed to a high degree of indulgence during the first years of their lives. This pattern of child-training may explain why, on one hand, the concern of Papago children about discipline is lower than that of the Pueblo Indian tribes and, on the other hand, higher than white children's concern. In the Pueblo tribes the training pattern, though it *appears* similar, is much more strictly channelized, and living close together as well as the highly community-directed organization expose the disciplined child much more to blame and ridicule by the neighbors than in Papago society, where family groups live farther apart. At the same time, however, the rare event of being directly disciplined will be of memorable concern for the Papago child, while for his average white age mate it is an accepted part of the recognized educational system, less worth remembering and mentioning.

TABLE 8

PRINCIPAL SOURCES OF ANGER AND SHAME AS DESCRIBED BY CHILDREN OF TWO PAPAGO AREAS AND BY WHITE CHILDREN (ROUNDED PERCENTAGES OF ALL ANSWERS CONCERNING EACH EMOTION)*

Source	Western Papago	Eastern Papago	All Papago	Whites
Anger:				
Aggression by others	24	40	27	21
Inconsiderateness by others	20	12	19	21
Authority, discipline	15	5	10	7
Restricted desires	5	4	9	15
Shame:				
Embarrassment in public	63	35	45	2
Bad behavior	11	28	23	48
Failure, inadequacy	2	7	5	21

* For source of data see Table 4. For age limits of the various groups and relation of columns 1, 2, and 3 see Table 6.

If all negative categories of the test are considered together, the children from both districts show the same amount of concern about discipline. It is interesting, though, that, while western children are predominately angry and sad about it, those from the East feel more afraid and ashamed. Again we seem to be confronted with a shifting of attitudes: the western child reacts with unruly emotion to a kind of discipline which, according to Papago standards, is itself unruly; the eastern child has apparently been influenced by the concept of reprised castigation acquired from school and church.

Restriction of desires seems to be a negligible source of anger and sadness

153 among the Papago; this is quite understandable if we recall that the Papago child knows few restrictions which do not apply equally to the surrounding world of grown-up people. His desires are usually respected and discussed with the same seriousness as those of his elders.

Embarrassment in public is the greatest cause of shame to Papago children of both the western and the eastern districts (see Table 8).

In the Papago society in which each family member shares the daily work, in which on festive occasions ritual performances by certain groups or individuals do not seem to play an essential role, accidental or purposeful singling-out of a person in front of a number of onlookers is likely to cause deep embarrassment. In children and young unmarried people this feeling of discomfort would probably be increased by the Papago principle of seniority which, though never very strict or forbidding, teaches the younger ones not to draw undue attention to themselves in the presence of older people. Besides these factors of social organization and child-training, the individual Papago's outlook on life seems to include a dread of conspicuousness.

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778 As we have seen before, among the Papago the average man and woman are expected to go through life with its sequence of work and pleasure in happy compliance with the good strokes of fate and in modest resignation to the bad. Extraordinary luck and spiritual power may come to anybody from the supernatural but cannot be achieved by effort alone. Whoever has this power is looked upon with awe. The obverse of this view is expressed in the relative lack of pity and charity shown to persons struck by misfortune and the ridicule thrust upon those who, being without supernatural favor, make themselves conspicuous. The latter attitude may be in part a protective device against the usurpation of undue power.

This may explain why the feeling of shame for Papago children is largely equivalent to embarrassment in public. Again we find that children from the western part of the Reservation, who are less acculturated, reveal this trait to a remarkably high degree, while eastern children have developed, probably in substitution, a clear tendency toward shame about their own bad behavior.

FEAR

153 The one unpleasant emotion about which Papago children responded almost as freely as to questions about "happiness" is "fear." Fear was, and apparently still is, an essential part of Papago life. In the desert which holds numerous dangers for man—death from starvation and the bites of poisonous snakes—fear is necessary for survival, because it cautions the daring and makes him doubly alert to the hidden enemy.

[Text continues on p. 204 - Analyst]

PLATE XX

United States Indian Service

Dusk over Papaguería

[p.203]

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THE DESERT PEOPLE

153 761 In the old days the two main fears of the Papago were apparently the dead and animals. Every dead person—not only the slain enemy, though he was considered particularly dangerous—might return, bringing suffering, sickness, and death. It is uncertain whether and how far this fear of the dead concealed feelings of guilt and hostility and how far it represented their channelization; but certain aspects of the Papago way of life seem to suggest that such feelings have played an essential part in this highly magical concept of fear.

153 578 761 In interpersonal relations unquestioned co-operation was necessary and required. Disturbances which might upset the household were dangerous to its total functioning and therefore extremely undesirable. Expressions of anger and acts of violence occasionally occurred, but they were considered unwise and bad. Only very grave offenses merited actual retribution rather than avoidance. There was little channelization of emotions into specific roles of action. Most of the occasional acts of violence occurred at festive gatherings with their license to pleasure and their complete release from tension, but these outlets were not officially sanctioned. Interpersonal relations with the tribal enemy, the "bad medicine man," and the dead were alone exceptions to this rule of smooth co-operation. However, emotions concerning the enemy and the bad medicine man were likewise concentrated upon the connection with the dead. The worst mortal danger came to the Papago not from the living but from the dead enemy; the bad medicine man's destructive power stemmed from his contacts with the dead. A dead person was not openly named, accused, or condemned; his potential malevolent capacities were implied in the terror of his return and might be mitigated through certain rites of purification and reconciliation.

153 Terror is the highest expression of repulsion, in which hate, anger, aggression, and destructive tendencies are combined and converted into an overpowering drive for avoidance. On the other hand, terror, as opposed to open aggression, is not in effect an object-directed release but self-directed tension. The Papago practice of concentrating negative feelings in terror and fear of the dead apparently had the following threefold effect: it minimized the interpersonal tensions occurring in daily life; it united the living in their common fear and avoidance of all the dead; and it enforced the defensive tension necessary for survival, at the same time shifting from the living to the dead the fears which limit strength and freedom of action.

The controlling efficiency of such a psychological mechanism would be based upon the exaggeration of one specific tension area, which probably induced a relative release of others, and upon its legitimacy, which would lend the security of general approval to negative feelings otherwise not sanctioned.

Its precariousness and limitation would lie in the fact that conflicts were not solved but only displaced and avoided. 153

The Papago believed that most commonly the dead approach the living in the form of animals, particularly of owls. Other animals, like the coyote, might be messengers from the land of the dead. But, beyond this, every single animal could become a bringer of death, sickness, and misfortune or, on the other hand, a helper and a sender of power and dreams (see chap. vi). Thus, the attitude toward animals seems to be an extension of the fear of the dead. The Papago fear of animals today seems to be connected with guilt feelings; very often it is the offended or maltreated animal to whose revenge misfortune is ascribed. The desirable attitude toward them—taught to the children from an early age—is avoidance. 153 825 761

TABLE 9

Principal Sources of Fear Described by Children of Two Papago Areas and by White Children (Rounded Percentages of All Responses)*

Source	Western Papago	Eastern Papago	All Papago	Whites
Animals	54	40	45	17
Clearly supernatural fear (ghosts, etc.)	12	10	10	1
Clearly objective fear (physical danger)	11	16	15	34
Subjective fear (night, noises, etc.)	7	15	9	14

* For source of data see Table 4. For age limits of the various groups and relations of columns 1, 2, and 3 see Table 6.

Present-day Papago children are greatly afraid of animals, as their responses to the Emotional Response Test show (see Table 9). Frightening experiences with animals take by far the first place among all remembered fearful occasions. Since these children are in daily contact with all kinds of animals including domestic beasts like cattle, horses, and dogs, evaluation of the test results is quite difficult. At first glance, a Papago and a white child who mention having been chased by a dog appear to have had the same kind of fearful experience. Knowing, however, the Papago belief in the potential supernatural character of all animals, and remembering that as late as 1943 several Papago ascribed a long drought to a large-scale killing of sick horses, we cannot be sure without further exploration where the fear of animals implies fear of the supernatural and where it does not. The principal difference between the two qualities of fear lies in the meaningful and intentional reference to himself which the frightening experience has for the individual afraid of the supernatural and in the practically limitless consequences to which he fears it may expose him.

153 It is probable that in Papago children the quality of fear may change from case to case and in most of them may be complex. Besides "objective" fear, as justified by an actually dangerous event, they probably will hold in varying degree fear of the supernatural either as an actual component of the frightening occasion or as a future threat, which may become active whenever special circumstances provoke a supernatural interpretation. The less acculturated western children, whose daily contact with animals does not differ from that of eastern children, show a markedly greater fear of animals.

Since, at the same time, the *range* of admitted frightening experiences is the same in both districts, it seems plausible that the difference between the two areas in fear of animals may be due not to a difference in experience but to a change in attitude. This theory seems to be supported by the fact that eastern children show a relative increase in the vague, indefinite anxiety which in the test appears as fear of loneliness, of the darkness and stillness of night, and the like—fears which are termed "subjective" in Table 9. This anxiety apparently increases where fear of the supernatural is low or not admitted, as the responses of white children and of the strongly acculturated Sioux[2] seem to indicate. Besides this anxiety, which in the eastern Papago is apparently the main substitute for fear of animals, children from that district show an increase in clearly "objective" fear.

THE "WORST THING"

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753 In asking the children about the "worst thing that could happen" to them, the testers expected to obtain an impression about their main concepts of the "avoidable," as developed from various negative experiences and emotions, as well as from observed and taught negative values. Papago children's answers to this question show that to them sickness is the worst of all things (see Table 10). Though this concept fits well with the observed high incidence of sickness among the Papago and with the physically uncomfortable conditions to which a sick Papago child often must submit, it probably reflects also the crucial position which the concept of sickness occupies in Papago supernatural beliefs (see chap. vi). Among the Papago such beliefs are still functioning with great strength as demonstrated by the medicine man's influence and by the wide use people make of his services today.

Of all areas of life in which the belief in supernatural influence and direction may anchor, those of sickness and death usually yield last to attacks from science. To the sick man, helpless and insecure, the thought of being a victim of his own guilt and an object of the intention of a supernatural force appar-

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[2] See Gordon Macgregor, *Warriors without Weapons*, p. 191.

ently holds much consolation. It increases his feeling of importance, gives an 153
egocentrically meaningful interpretation to the causes of his suffering, and 153
thus leaves open unto the end a hope of recovery—because what is caused through guilt or through a higher will may be undone through repentance and sacrifice, attempts at reconciliation, or the employment of a power greater than that which sent the sickness.[3]

Thus it is not surprising that the change in values we have observed in other 153
spheres among the eastern Papago children is not noticeable with regard to the concept of sickness. In contrast to white children, Papago children from both districts mention death as the "worst thing" less often than sickness. This may be due partly to avoidance of mentioning death; the Papago child's mind will necessarily dwell more upon the most common effect of magical activity, i.e., sickness.

TABLE 10

THE "WORST THING THAT COULD HAPPEN," AS DESCRIBED BY CHILDREN OF TWO PAPAGO AREAS AND BY WHITE CHILDREN (ROUNDED PERCENTAGES OF ALL RESPONSES)*

Source	Western Papago	Eastern Papago	All Papago	Whites
Sickness	30	36	38	11
Death	9	14	10	20
Bad behavior	9	19	16	5
Inadequacy or failure	5	5	4	18

* For source of data see Table 4. For age limits of the various groups and relations of columns see Table 6.

Among other concepts of the "worst thing" we find again that personal badness or bad behavior are mentioned more often in the East than in the West. The most striking difference between white and Papago children besides the reversed evaluation of sickness and death, is white children's great concern about their own inadequacy, which to Papago children is of very little importance.

IMMANENT JUSTICE AND ANIMISM

In connection with what has been said about the role which the supernatural seems to play in certain emotional experiences of Papago children, the results of the test for belief in "immanent justice" and "animism" are of particular interest.

This test does not refer to actual experiences and their emotional interpreta-

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3. There are many examples which show that in these crises the appeal to supernatural and even magical forces and means is not rare in modern white society.

tions. It attempts to find out how far children tend to consider the more or less ordinary events happening to them to be direct consequences of their own behavior, even when there is no objective causal relationship. Devised to reveal the degree of egocentricity in children, the test does this by determining the extent of magical interdependence which a child feels to exist between himself and the surrounding world.

In the test story a boy who has committed a misdeed subsequently suffers an accident. A child who interprets this accident as punishment inflicted upon the boy for his misdemeanor shows egocentricity by his implication that a coincidental event takes place because of the boy's misdeed. At the same time, in implying that the accident has been intentional, he assumes vaguely that it has been brought about by supernatural or magical forces.

TABLE 11

BELIEF OF INDIAN AND WHITE CHILDREN IN "IMMANENT JUSTICE"
(PERCENTAGES OF RESPONSES IN EACH GROUP INDICATING BELIEF)*

Group	Ages of Children			
	6	7–8	9–10	11–12
Piaget's Swiss children	86	73	54	39
	6–7	8–9	10–11	
Lerner's American children	82	70	31	
	6–8†	9–11	12–18	
Papago children:				
Western	53	93	91	
Eastern	76	85	87	

* Data in this table and the following are from Robert J. Havighurst, "Belief in Immanent Justice and Animism among Indian Children of the Southwest and Sioux" (MS).

† These percentages are based on the responses of very small groups of children—seventeen in the West and twenty-three in the East.

It should be noted that "egocentricity" on this level is not necessarily identical with crude egocentric behavior in interpersonal contacts in the ordinary sense of the term. Self-reference as expressed in belief in immanent justice may, for example, be observed in adults all over the world combined with highly developed standards of charitable behavior. Piaget, Lerner, and others found that in modern white children this concept apparently is dominant to a high degree in early childhood and gradually decreases as the child grows up (see Table 11).

In contrast to these findings, older Papago children do not reveal a decrease of belief in immanent justice. Instead the responses of children from the eastern area show that older children believe in it more than children of six to eight; in the West this belief is considerably more common among the older children than the younger (see Table 11).

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We cannot very well assume that the crudest possible process of thought which may be the source of belief in immanent justice in earliest childhood—i.e., the simple egocentric generalization of a self-experienced cause and effect mechanism—also operates in adolescent Papago children. The results seem rather to confirm the impression that Papago children's thoughts and possibly also their behavior are to a very high degree influenced by a belief in guidance and retribution through supernatural forces or in magical interdependence of the self and the surrounding world. Though Papago believe that the activity of supernatural forces is ultimately unpredictable, they also think that human behavior may provoke them to anger and vengeance. From this test we do not know to what extent the force of guidance and retribution may be merged in these children's minds with the Christian concept of God who rewards the just and punishes the unjust.

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TABLE 12

Belief in "Animism" Revealed by Papago Children of Two Areas
(Percentages of Responses Indicating Belief)*

Group	Age 6–8†	 9–11	 12–18
Western Papago	71	92	65
Eastern Papago	74	57	44

* For source of data see Table 11.

† For size of groups see Table 11.

In the test story the accident happens by means of an ax which slips, cutting a boy's foot. In modern white society young children show to a high degree a belief that inanimate objects are alive, acting and reacting like animate beings, particularly like the child himself. This belief in "animism" was observed to decrease progressively with age among white children, in line with their decreasing belief in immanent justice. Papago children's reactions reveal at least a tendency to agree with those of white children in regard to animism (see Table 12).

The results obtained from Papago children are interesting not so much for the decrease in animistic belief with advancing age as for the statistically less pronounced drop found in the western districts. Belief in animism may be assumed to vary with the objects concerned: where, for instance, an ax is clearly inanimate, a celestial body may be considered alive. In this respect the decrease in animistic responses to the particular story used in this study cannot convey a clear, conclusive picture about possible animistic beliefs among Papago children, especially since in their culture the supernatural is so widely believed to act in the form of and through animals. On the other hand, the compara-

153 tively high percentage of adolescent western Papago children who attribute
774 life to the ax seems to indicate that a generalized form of animism is a part of Papago culture but may be modified in the eastern area through influences of modern white culture.

On the whole, the findings of this test give the impression that interactions between the self and supernatural forces occupy a larger sphere in Papago children's minds than in those of white children. Probably the limits of this sphere are flexible and may even be constantly changing in the same individual. This was exemplified by the case of a highly acculturated, intelligent, normal Papago adult who, falling ill, interpreted the sickness as a punishment inflicted by God, as a symptom of having been given medicine power by supernatural forces, and as gastroenteritis.

In the same manner the life of Papago children and their behavior may be influenced, sometimes continuously, sometimes occasionally, by the omen, warning, reward, or punishment into which any ordinary event may change. As subconscious desires and guilt feelings projected into the supernatural, the belief in immanent justice and also in animism may function as a vaguely defined religious conscience which, whenever usual emotional and moral standards fail, may at any moment emerge and change the course of life.

Chapter XVI

STANDARDS OF BEHAVIOR

AS WE have seen, selective emphasis and limitations recognizable in freely 153
admitted emotional experiences may implicitly reflect behavior standards. But social standards of behavior are more explicitly and directly revealed 577
in the discrimination between right and wrong, between "good" and "bad" behavior, elicited by the questions of the Moral Ideology Test: "What could a boy (girl) of your age do so that someone would praise him (her) or be pleased?" and "What would be a bad thing to do so that someone would blame him (her) or think badly of him (her)?"

In addition to belief in magical and supernatural forces, the main behavior requirements for smooth functioning of the old Papago society were work, co-operation, and avoidance of aggression. To children these requirements were constantly emphasized by the living examples of their elders and in home teaching, as they still are today (see Part II above).

According to answers given by Papago children to these test questions, doing good work is still recognized as the foremost means of obtaining social approval, and laziness as the most frequent source of blame. The work mentioned is usually concrete, specific, and done for the family; it seldom includes elements of achievement and prestige.

This unequivocal congruency between vital socioeconomic needs and values of behavior (which was found in all Indian tribes studied except the Sioux) is one of the most interesting findings of the Indian Education Research Project, because it throws light upon a source of value formation which is usually obscured in more complex societies.

The high percentage of agreement found in Papago children's definitions of "good" and "bad" as well as the marked agreement between socioeconomic needs and recognized adequate forms of behavior seem to point both to a strong cultural cohesion among the Papago and to a close integration of culture with socioeconomic organization.

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In the eastern districts, where alien influences have operated for a longer time and where they exert a more constant pressure, uniformity of reaction to good and bad behavior, though still high, is less than in the western districts (see Table 13). In the East we find a higher positive evaluation of thoughtful and kind behavior, consistent with the results obtained through the Emotional Response Test. School and school education are more highly valued. On the negative side, aggression, stealing, and use of bad language are more important.

TABLE 13

"Good and Bad Things To Do" as Described by Children of Two Papago Areas and by White Children (Rounded Percentages of All Responses by Each Group)*

Source	Western Papago	Eastern Papago	All Papago	Whites
Work†	50	35	42	10
Care of property	7	1	3	4
Kindness	4	7	6	11
Doing well in school	1	4	3	10
Aggression	7	13	10	3
Stealing	8	13	12	2
Drinking	3	2	3	2
Use of bad language		1	1	2

* Data from Robert J. Havighurst, "Comparison of the Moral Ideology of American Indian and White Children" (MS). Data for white children are for ages eight to ten. For the purposes of comparison, only the Papago children of these ages are included in the figures for "All Papago" (col. 4). Thus column 4 does not represent an average of columns 2 and 3, which include children six to eighteen.

† Percentages for this item include responses concerning work as a good thing and laziness or shirking as a bad thing.

The patterns of behavior standards revealed by the eastern and western Papago children in the Moral Ideology Test are distinguished chiefly in that in the West the old pattern of co-operative activity is still more prevalent. Psychologically such a pattern puts the satisfaction and security deriving from praise within immediate and constant reach of everybody with average mental and physical capacities; makes good behavior visible and concrete in the completed work; and leaves little room for emotional demonstrations of bad conscience and repentance which would tend to inhibit efficiency. This exteriorization of values probably dissipates interpersonal tensions, much as occupational therapy does, by turning the individual's attention from himself and toward the group through the neutralizing process of work.

In contrast, the pattern of behavior standards shown by children from the eastern districts seems to reveal symptoms of a more internalized, self-directed

morality, as indicated by the greater emphasis on character traits like kindness 153
and friendliness rather than on the value of work. Seen together with these
children's concern about aggression and other bad behavior and their frequent 577
admissions of anger caused by experienced aggressions as revealed by the Emotional Response Test, this shifting of values suggests the rise of tensions and conflicts which cannot be effectively controlled by the action of work.

The children's answers directly reflect values taught by the missions, as well 153
as disturbances of cultural and socioeconomic cohesion, as is manifest, for ex- 577
ample, in the split between Catholic and Presbyterian Papago and in the in-
creasing influence of individual wealth and prestige in a formerly uniform and 797
levelized group (see chaps. vi and vii).

To the Papago, work was centered in and done for the family group. White standards of competition and individual achievement thus must seem to him—and probably are, in effect—in direct opposition to the central institution of his life. The individual who is being slowly deprived of the confident assurance that his world is unquestionably right, absolute, and eternal must then resort to other sources of security and accept other values and standards of behavior.

Christianity, as it has been presented to the eastern Papago for the last thirty years, has obviously become the most important new source of security. In the beginning it may have caused doubt and conflict, but today the Papago's serious and eager participation in mission services and institutions is ample evidence that here he finds security.

The Christian principles of peace, kindness, consideration for one's neighbor, and avoidance of aggression are familiar to the Papago, in whose culture these principles have long had a place. While previously they were devices with a social function, developed out of the needs of Papago family groups and communities and aimed toward their best possible maintenance, these principles are now presented as imperative moral demands of an absolute character, to be pursued by the individual independently of, and if necessary even against, actual requirements of the society. As the scope of these demands is not limited to the accomplishment of certain duties but extends to self-improvement and salvation, "goodness" and "badness" are now becoming the attributes not only of actions but also of thoughts, attitudes, and motives. Psychologically they imply a stronger development of personal conscience and of self-scrutiny and guilt feelings.

Whether and how far this pattern of changing behavior standards fits the 153
changing total psychological and socioeconomic situation we shall see when 577
dealing specifically with the problems of Papago adjustment to white Ameri-
can civilization. At this point a few words should be said about one unexpected 421

153 result obtained from the Moral Ideology Test in regard to the concept of
577 stealing.

421 In the old Papago society, stealing was ordinarily done by enemy raiders and did not constitute a problem within the society, for people in need were supported by their relatives. Even today stealing is extremely rare among the Papago. At the same time, we find from this test that there is a discrepancy between the attention given by Papago children to the value of personal property and the concern about stealing as a cause for blame. This trend is more pronounced in the more acculturated eastern districts than it is in the West.

Apparently we are dealing here with a one-sided, negative approach to the concept of property. The value of property beyond subsistence uses has been introduced into Papago society under more pressure than any other white concept. Its positive manifestations—such as the creation of jobs and the establishment of co-operatives for the sale of cattle and horses—have been less generally experienced than its more negative effects—the building of cattle guards between districts, the introduction of relief, and the emphasis laid in school and church upon the sanctity of personal property in the face of a society which, still largely co-operative, is only in the earliest stage of developing an individualistic, competitive system. Sanctions against taking someone else's property were imprinted upon the minds of the Papago before they were allowed to realize that they could acquire property for themselves by legitimate means.

From this point of view the attention given by Papago children to the concept of stealing seems largely a direct effect of a kind of indoctrination not uncommonly used in dealing with minorities. It is characterized by the introduction of new principles through a vanguard of restrictive rules which have no organic basis in the minority group's experience and are only slowly assimilated with opportunities for such experiences and for development of corresponding positive values. The psychological effect of this sort of indoctrination is demonstrated in the world of Papago adults by feuds between districts about grazing land; in that of their children, by bickerings about the ownership of pencils, hair ribbons, and candy sticks.

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577 Of main interest to us is the conclusion from these findings that, where values similar to those already existing in Papago society have been introduced from outside with comparatively little coercion, there is a certain equilibrium between the development of positive behavior standards and those of restrictive, negative significance—as, for example, between kindness, on the one hand, and avoidance of aggression, on the other. Where, under pressure from a differently oriented society new principles are encroaching upon the Papago, this equilibrium seems to be lacking; and the constructive, positive standards are outweighed by the negative.

Chapter XVII

BENEATH THE SURFACE

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AFTER examining Papago children's reactions and attitudes as they are manifest in answer to direct questions, we tried to find out whether these admitted attitudes are anchored in certain traits of their personality structures, and, if so, to what extent. What is the average pattern of Papago children's personalities? Which are the essential driving forces for their behavior? How are they able to control their impulses, and which ways of defense do they adopt toward inner and outer conflicts?

A child's statements that he is happy when he goes to a fiesta, sad about the death of a family member, or afraid of an owl, and that working and being lazy are his most important standards for "good" and "bad" behavior, give certain clues to his experiences and interests. But they do not reveal whether he is dominated by his impulses or dominates them, whether he is outgoing or withdrawn, daring or cautious, matter-of-fact or imaginative, self-confident or full of anxiety. Only within the configuration of such traits and their proportional weight do the clues gain importance.

For an approach to the personality configuration of Papago children two projective tests were used—the "ink blots" of the Rorschach Psychodiagnostic Test and Murray's Thematic Apperception Test—both of which have been employed during recent years with increasing success for the personality diagnosis of normal and psychopathic individuals in various institutions for psychological research and in hospitals. Both tests reveal traits, reactions, and attitudes as they are unknowingly "projected" by the tested person into his interpretation of the test material.

According to the Rorschach test, the average pattern of Papago children's personalities is characterized by the following features:

1. Papago children's average personality structure reveals no elaborate complexity of traits or subtle differentiation of existing traits.
2. Papago children show spontaneity, limited range but intensity of emotions, a relatively precarious control and discipline, and a peculiar swing between realistic participation in the life about them and extreme withdrawal.

157 3. Against outer and inner conflicts they seem to defend themselves essentially by evasion and by subjective interpretation of facts and feelings.
4. Though they are able to form clear concepts and to categorize them, the children reveal a tendency to disregard this capacity, enforcing their associative thoughts upon objects of reality. Thus their intellectual approach seems to be largely subjective interpretation, instead of objective and analytical.

These findings and various concomitant ones will be combined in an attempt to develop a picture of the average Papago child's personality and to discover the cultural factors which help to determine this specific personality formation.[1]

155 157 The description of Papago child-training in Part II emphasized the almost complete indulgence of the small child, the liberty of action and decision in vital matters granted to all children, and the Papago methods of discipline: co-operative work, rules of seniority, and fear of the supernatural.

As previously noted, the life-situation of the child after babyhood is very similar to that of adult family members. There is no neat distinction between the reactions and attitudes expected from children and those expected from adults. Though a gradual growth in wisdom is generally assumed and demanded, and the right of decision and free action gradually increases, this process does not stop at maturity; the man of forty as well as the boy of ten listens to the advice of the seventy-year-old head of the family.

The Papago view and organization of life does not distinguish definite developmental phases. Even the very young child is drawn into the co-operative working group with small tasks which increase with advancing age. There are apparently no rites of initiation into adulthood except those for girls entering puberty.

Within the household there is no definite distinction of roles except according to sex. Though the greater weight of authority is on the side of the males, the areas of influence granted to each sex are fluid; they overlap and vary from one family group to the other with the constellation of personalities. In this moderately patriarchal co-operative working group, the accent is more on the co-operative quality than on the patriarchal. The amount of work required from each sex reveals no one-sided exploitation.

The family discipline pattern is characterized by its application to all members alike, regardless of age. There are practically no tales, teachings, or restrictive rules of behavior especially devised for a childish mind. The child who is warned of the sickness-conveying breath of an animal knows that his elders /155 truly believe what they are telling him and that they are conscientiously observing their own warnings. The child who has to interrupt his play to work /157 in the fields or at home sees his parents doing the same kind of work. He himself will eat the wheat he has sown and drink the water he has hauled. He may always be sure that his parents will not call him away from play and give him some task that is meaningless just "to keep him out of mischief." So he realizes that any restrictive and frustrating work is a burden shared by the grown-ups. This sharing of children and adults in common disciplinary experiences probably has a decisive influence on the quality of interpersonal relations within the family group. It also considerably reduces the authoritative, coercive pressure felt and realized by the child.

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[1] The reader will observe that the analysis of the results of this test is not documented with tables as is the case with tests previously discussed. This is because tables dealing with Rorschach materials are highly technical. Data on the Papago Rorschach results are included in a forthcoming monograph by Irving Hallowell, Royal B. Hassrick, William E. Henry, Alice Joseph, Bruno Klopfer, and Dorothea C. Leighton, "American Indian Rorschach Studies."

Open authoritative coercion is represented in the Papago pattern of discipline only in the rules of seniority. Actually, direct coercion based upon the rights of seniority is usually neither harsh nor one-sided; or is it even consistent. It is ordinarily expressed by means of patient, verbal persuasion; it leaves open wide possibilities of appeal to higher instances; and it is so little formalized that not rarely an individual with a strong personality may get the better of the authoritarian rights of his senior.

The social sanction of ridicule, in use among relatives and nonrelatives, is an indirect means of coercion of considerable importance. This sanction, however, seems to be employed without extreme severity or viciousness. Distance between the household units may itself have prevented further development of this restrictive device because its effectiveness depends primarily upon the individual's constant exposure to close scrutiny by a compact group of people, against whose opinion any personal counterattack is hopeless.

This low-pressure discipline has apparently been very adequate for producing personalities capable of coping with living conditions in the southern Arizona desert. A more severe and formalized system would possibly have hampered the life of mobile defense the Papago had to lead. For centuries seminomadic, moving between their mountain homes and the valleys according to the changing water supply, they needed their youngsters helpful and compliant, but not a submissive burden, dependent upon constant direction or firmly tied to a system of rules and laws which could not possibly be kept functioning during the hazards of their semiannual treks.

Industriousness is extremely desirable, but work under the glaring sun of southern Arizona requires patient and willing perseverance, not as does the tense rhythm of seasonal work, strict training in co-ordination, and accuracy.

Coherence of the family as a working group is necessary, but in this sparsely

155 157 populated country, where a lone man runs the risk of starvation, the natural bonds of emotional attachment do not have to be rigidly enforced by a centralized authoritative system.

The training given to Papago children with regard to dangers which may threaten their life and well-being has also probably been largely determined by the environment. The wide desert with its sparse vegetation of cacti and low brush, with its rim of moderately high mountain chains, with its poor water supply and a temperature rising in summer to 120 degrees Fahrenheit, has at once protected and exposed its inhabitants through times immemorable.

It has protected them from close and constant pressure of outside enemies and has exposed them to those comparatively few who, like the Apache, were dari[illegible]nough to break into this country of little promise and great menace. Without natural strongholds steadfast resistance was no defense. Though there are still remnants in the desert of crude walls behind which several Papago groups attempted to defend themselves, their major defense apparently lay in escape. Again and again whole family units threatened by raiding Apache left the sites of their villages and settled in distant parts of the desert.

Even today, when the Papago expect a visitor from the Agency whom they fear or dislike, they may leave their houses and hide in the mountains until they feel safe again.

Factors of simultaneous protection and exposure are also present in the daily life of those who call the desert their home. The desert's vastness alone provides security in cases of localized famine, drought, and epidemics, for almost always means of subsistence can be found in other valleys or in the mountains. On the other hand, sudden dangers which could not be prevented by prevision and planning have been a constant threat: dangerous snakes and insects, prolific in the desert, may injure the most cautious and careful. As the Papago evade enemy attacks, so they try to avoid the unmanageable dangers of daily life. In discussing Papago children's reactions to frightening experiences, we have already noted the apparent strength of this trend, and we have seen that it goes with the tendency to interpret danger as a manifestation of supernatural and magical forces.

Not only the obviously and physically harmful are avoided; the chipmunk, the rabbit, one's own dog, and even the beloved horse may unpredictably turn into a supernatural agent dealing out misery and death.

In this system of child-training, the imbuement of everything outside of family and friends with potentially menacing traits probably enormously increases the security the child finds in the family and, at the same time, produces from an early age the constant defensive awareness and caution necessary for survival in the desert. The magical interpretation of dangers very 155 probably prevents this device from harmfully inhibiting individual liberty of action, as far as this is desirable in Papago society. Every event being two-faced 157 (i.e., having both simple objective reality and potential supernatural significance which of itself implies danger), man's attitude toward it will be cautious awareness but not discouragement. The chances are that, if he behaves appropriately and is a good Papago, the supernatural will not act.

If, with these implications of Papago child-training in mind, we turn back to the picture of average personality structure presented by the Rorschach test, we find that Papago children indeed seem to be influenced by the factors we have mentioned.

They show a comparative simplicity of traits and reactions which may be a result of little differentiated outside and inside pressure. In this respect, Papago children of high and low intelligence, of outgoing or withdrawn type, closely resemble one another. Emotional development appears as an increase in depth of the same emotions and attitudes rather than as a widening in reactions and outlook.

Quite vivacious and spontaneous in their emotions, Papago children display toward the world and its stimulations an attitude strangely composed of acceptance and rejection. This attitude of rejection, however, seems to be quite easily broken down or abandoned at will. Such rather precarious resistance to a tempting or irritating world is evidently their primary means of curbing drives which become too strong or too disturbing. In the light of child-training pattern, which aims at smooth co-operation without enforcing strict obedience, the relative lack of specific means of self-control regarding social relations is not surprising; satisfactory adjustment to Papago society is apparently possible without it.

The children's tendency to shut themselves off from the outside world by bluntly rejecting it may be closely related to the following findings. Papago children, more than any of the five Indian tribes studied, are inclined to get caught by their own imaginations, into which they withdraw. These fancies frequently seem to be an almost automatic association, loosely connected to reality. Therefore, they are likely to appear irrational, vaguely defined, and diffuse.

This trait is quite different from the escapist's withdrawal into a fantasy world of his own or from the introvert's controlling his conflicts by means of a strongly developed inner life. It resembles more closely the psychological state of a seer or medium and seems to be related to that peculiar infusion of reality with supernatural and magical concepts which is an important part of Papago

155 157 life and child-training. Apparently it operates as an almost automatic control in occasions of stress and conflict. In this sort of withdrawal which usually appears to be an intermittent reaction, not a definite introversion, the Papago child temporarily stops functioning as a social being and—quite legitimately according to his culture—isolates his personal drives of disturbing strength or direction in his imaginings.

Together with this reaction goes a tendency to evade commitments whenever possible. If pressed for decision, the children try to withdraw into themselves or appease the demanding agent with what they think is the minimum that may satisfy him and that may be conceded without exposing themselves. This trend, as we have noted, corresponds to an important function in Papago culture.

The most interesting result obtained with the Rorschach test is with regard to Papago children's mental approach, which is characterized by a strong drive to impose subjective interpretation upon reality and to avoid categorizing. We have already seen that the basis of this quality probably lies in the fusion of magical thought and reality in Papago culture, and we may assume that it is closely interrelated with the tendency to yield to imagining, as well as with the particular nature of the things imagined.

The influence which such findings may have upon the evaluation of the results of the Grace Arthur intelligence test is perhaps worth some consideration. According to the Rorschach test, aside from the tendency to avoid categorizing, Papago children seem to be capable of forming clear, objective concepts; but, especially when facing new and disquieting problems, this capacity and their fair faculty of differentiation, and of more complex organization of thoughts, are at times entirely obscured. Since the Arthur test scores these latter qualities for the most part, it is possible that this factor may have lowered the average I.Q. of western Papago children, who are more dominated by their native culture than the eastern children.

This also explains the low average level of creativity in Papago children according to the Rorschach test. They use imagination for personal control and satisfaction rather than objectifying it. Papago express themselves artistically in singing—the most subjective of all arts, in which the singer projects his feelings more into the rhythm or melody than into clearly formed thoughts—
[533] and by basketry the beauty of which is mainly achieved with a strong color
[285] contrast of black and white and much less often by a balanced or subtle design. Papago children's originality, as it appears in the Rorschach test, lies chiefly in the strange and quite often unreal quality of their thought content and is usually not accompanied by highly differentiated perception.

155 157 It is necessary to point out that, in spite of the apparent influence of magical concepts upon their thinking and in spite of their peculiar trend toward withdrawal, Papago children seem to be relatively at ease and undisturbed. If the child's fancies are at times horrifying, anxiety is possibly greatly reduced by recognizing the source of terror as in the area of the supernatural. This mechanism, absolving the individual from responsibility for his own conflicts, probably prevents a lasting traumatic effect upon his personality. It is therefore not surprising that free-floating anxiety is an inconspicuous trait in Papago children, according to the Rorschach test.

[834] The main direct outlet these children have is the strong, natural function of their instinctual drives, including those of sexual nature. Papago culture apparently does not have sexual restrictions other than those regarding married women and young girls, and even these do not seem to be very rigid. Sex itself is not evaluated as "good" or "bad."

Lastly, one peculiar feature of the Rorschach findings may be mentioned, though it is not evident from the average results of the whole group but is an impression which arises only when the individual records are scrutinized: although Papago children's personality patterns show structural simplicity, individual differences are quite marked. Moreover, the records suggest that individuals are exceedingly responsive to formative influences of their direct environment (family constellation and coincidental events). This susceptibility combined with the over-all simplicity of the personality pattern seems to favor pronounced individualization within a limited range of traits, producing a curious effect—as though each individual were a specific reactive type. The reader will get a similar impression from the sketches of eight Papago children included in the Appendix.

The results of the other projective test used in this study—the Thematic Apperception—are to a high degree consistent with those of the Rorschach. This test also found in Papago children a certain lack of personality elaboration, unsophisticated spontaneity, a relatively loose discipline, importance of fantasy life, little anxiety, and unrestricted impulses (particularly sexual impulses).

Chapter XVIII

PAPAGO SOCIETY AND THE INDIVIDUAL

157 WHAT are the interpersonal relations of such personalities as we have seen in the previous chapters? Do Papago children develop close emotional ties with specific persons, and to whom are their strongest loyalties directed by training and experience? Some answers to these questions are furnished by the Thematic Apperception, the Emotional Response, and the Moral Ideology tests, which reveal the children's reactions largely within a social setting.

The interpretative statement derived from the results of the Thematic Apperception Test—"the interpersonal contacts are organized on an individualistic basis, and few social cohesions and socially demanded group loyalties exist"[1]—seems to agree very well with what we know of Papago children. But, before we can fully understand its meaning and significance, we will need further explanations and a careful analysis of the attitudes of the children toward various persons in their social environment.

Answers to the Emotional Response Test show that members of the family,
157 particularly parents, play by far the most conspicuous role in experiences of
571 happiness and the "best thing." The unpleasant emotions of fear, anger, and shame are more prevalently connected with people outside the family group, chiefly represented by the undefined "somebody," "people," or "they."

There is considerable difference between the attitudes of boys and girls, although they named similar emotional experiences (see Table 14.). The boys connect pleasant experiences, as far as the family is concerned, almost exclusively with the father, and they mention nonrelatives quite often. In contrast, the girls associate most of their pleasant emotions with the mother, but they do not concentrate so strongly on her as the boys do on the father. They derive a good deal of pleasure from other members of the family, including the grandparents, the father, and particularly their sisters and brothers. Among nonrelatives, only their age mates play a role, and, on the whole, girls appear more dependent upon the family than boys. 157

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[1] William E. Henry, "Notes on Papago Cultural Analysis from Thematic Apperception Test Material" (MS), p. 5.

Regarding unpleasant experiences, the difference in reaction between boys and girls is very slight (see Table 15). The parents cause scarcely any negative 571

TABLE 14

PERSONS ASSOCIATED WITH HAPPINESS AND "BEST THING" BY PAPAGO AND BY WHITE BOYS AND GIRLS (ROUNDED PERCENTAGES OF ALL PERSONS NAMED)*

	Papago			White		
	Boys	Girls	Total Group	Boys	Girls	Total Group
Whole family	46	72	59	69	76	74
Father	34	8	21	10	9	10
Mother	4	28	16	15	14	15
Siblings	8	20	14	17	23	20
Age mates	23	24	24	17	18	18
"People"	19	4	12	3	4	4
Teacher	..	..	..	11	2	7

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* Data in Tables 14–16 from Robert J. Havighurst, "A Comparison of American Indian Children and White Children by Means of the Emotional Response Test" (MS).

TABLE 15

PERSONS ASSOCIATED WITH FEAR, ANGER, AND SHAME BY PAPAGO AND BY WHITE BOYS AND GIRLS (ROUNDED PERCENTAGES OF ALL PERSONS NAMED)*

	Papago			White		
	Boys	Girls	Total Group	Boys	Girls	Total Group
Whole family	30	23	27	38	63	52
Father	3	1	2	4	7	6
Mother	3	7	5	13	21	17
Siblings	14	11	13	13	24	19
Age mates	17	18	18	29	14	22
"People"	30	34	32	24	18	21
Teacher	2	3	3	8	6	7
Drunkards	4	9	7	1	3	2

* For source data see Table 14.

feelings. This type of feeling within the family is mainly directed by boys toward their brothers and by girls toward their sisters. In general, whenever Papago children mention specific persons, whether relatives or nonrelatives, they tend to associate them more with positive, pleasure-producing emotions than with negative ones.

Among persons mentioned in connection with frightening experiences, drunken men play an important role, particularly in the minds of girls (see Tables 15 and 16).

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The persons whom the children name in the Moral Ideology Test as praisers or blamers are obviously their usual disciplinarians. This function, too, is fulfilled mainly by the family, leaving little room for disciplinary interference by other people (see Table 17). The boys are inclined to look upon the father as judge of their behavior, the girls far more upon the mother: but parents play a greater role as disciplinarians for girls than for boys, who apparently receive a good deal of attention from other family members.

TABLE 16

Principal Persons Associated with Fear by Papago and by White Boys and Girls (Rounded Percentages of All Persons Named)*

	Papago			White		
	Boys	Girls	Total Group	Boys	Girls	Total Group
Whole family	40	14	28	42	71	59
Father	6	..	3	6	9	8
Mother	6	7	7	11	24	18
Siblings	11	..	6	11	23	18
Age mates	..	..	..	32	9	21
"People"	11	14	13	17	12	15
Teacher	6	7	7	6	3	5
Drunkards	11	36	24	3	9	6

* For source data see Table 14.

TABLE 17

Persons Named as Chief Disciplinarians by Papago and by White Boys and Girls (Rounded Percentages of All Persons Named)*

	Papago			White		
	Boys	Girls	Total Group	Boys	Girls	Total Group
Whole family	71	74	73	47	43	45
Father	24	15	19	7	3	5
Mother	20	40	30	15	15	15
Grandparents	5	4	4	..		..
[illegible] mates	5	6	5	10	8	9
"[illegible]rybody"	9	8	8	12	15	14
Teacher	3	5	4	14	18	16

* Data in Tables 17 and 18 from Robert J. Havighurst, "Comparison of Indian Children and White Children by Means of the Moral Ideology Test" (MS).

To the boys, the father seems to praise and blame equally, while the girls consider him more frequently as a blamer. However, the mother is seen by boys and girls alike, chiefly as a rewarding agent. Persons not clearly belonging to the family group, i.e., elders, age mates, or just "everybody," are all mentioned, by boys as well as by girls, more often as blamers.

While the number of persons mentioned in answers to the Emotional Response Test was too small to analyze the results for differences between western and eastern communities, this could safely be done with regard to the disciplinarians named in the Moral Ideology Test. The most important difference between the two districts lies in the much greater attention paid the family by western children, who indeed seem to reserve the right of approval and disapproval almost exclusively to their parents and grandparents (see Table 18). Reward and blame are more evenly distributed than in the East; the father's role as a disciplinarian, particularly as restrictive agent, appears rather strong—even to the girls—and, though grandparents and the mother are mentioned more often as praisers, they, too, are often noted as blamers. 157 571

TABLE 18

PERSONS NAMED AS CHIEF DISCIPLINARIANS BY PAPAGO BOYS AND GIRLS OF TWO AREAS (ROUNDED PERCENTAGES OF ALL PERSONS NAMED)*

	Western Papago			Eastern Papago		
	Boys	Girls	Total Group	Boys	Girls	Total Group
Whole family	80	84	82	65	67	66
Father	35	21	28	20	10	15
Mother	30	38	34	13	44	28
Grandparents	5	9	7	5	..	3
Age mates	4	4	4	6	7	7
"Everybody"	4	6	5	14	9	11
Teacher	..	..	..	4	9	6

* For source of data see Table 17.

In the East the father and the grandparents seem to have lost much of their importance as disciplinarians for both boys and girls. Their place, particularly as blamers, has apparently been taken by age mates, by the undefined group of "everybody," and by the teacher. This move away from the family is less evident in eastern girls, who show even more regard for the reassuring, approving role of the mother than western girls. But eastern boys reveal clearly a trend toward detachment from the family, since for them both parents have lost much of their influence. On the whole the impression is that in the East the restrictive functions of the family have been comparatively lessened, while those of assurance and reward have been preserved to some extent.

The results of these two tests confirm the tentative conclusions advanced in previous chapters in which the psychological effects of Papago social organization, child-training, and outlook on life were analyzed. The reader will recall that several times—in discussions of the role of the supernatural, cooperative work, and common disciplinary experiences—it was inferred that 157 593

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security and protection felt by children within the family must necessarily be very strong. It seems that for the individual Papago the family constitutes at once the main basis for survival, a major incentive for struggling with life beyond the most elemental individual needs, and the chief haven of refuge from dangers which to a disproportionately high degree are conceived as existing in the extra-familial world.

In Papago society the family is the only stable element on which the individual can rely. Originally it had no serious competitors—no communal institutions, ceremonial systems, or superimposed authoritarian organizations which might have functioned as substitutes toward which the individual could turn for support in times of stress and insecurity, or which might have served as fields of action. Elements of unpredictability and arbitrariness in the supernatural seem to have more psychological significance than the assurance derived from this concept. As previously suggested, this may increase the security and desirability of human companionship, specifically that of one's relatives, whose possible magical power will probably at least be a known quantity. On the other hand, stability of the family, which so completely and permanently fulfils its function of feeding, clothing, and protecting the individual throughout life, even in cases where he cannot or will not co-operate, has not developed to any extent those often concomitant restrictions of direct pressure upon the individual and severe limitations of his freedom of action.

Relations between the individual members of the family are little formalized, despite the relative supremacy of males over females and of age over youth. This principle reserves to the oldest man the right of speaking first but requires him then to listen to the opinion of every member of the household; it leaves decision for action largely to common discussion and agreement; it does not concentrate privileges on one side and duties on the other but distributes them in such a way that they fit organically the natural inclinations of the sex and age of the various individuals.

Such a distribution is psychologically sound. The resentment which may arise in old age from loss of physical ability is compensated by increasing prestige. Surplus energies and emotions which in the young adult and middle-aged man and woman may easily result in aggressive pursuits and self-destructive suffering are to an appreciable extent absorbed by responsibility for and pride in being the chief providers for the family. The child, receiving the greatest share of affection and indulgence, is protected from too great and too early demands on his physical and mental strength. Finally, the esteem, rights, and privileges granted to women because of their childbearing capacity compensate them for the limitation of their sphere of influence and activity.

PAPAGO SOCIETY AND THE INDIVIDUAL

In such a setting interpersonal tensions are probably seldom caused by dis- 157
crepancies and conflicts between social demands and individual inclinations 593
but probably arise generally between individuals of different temperament and character. Children are chiefly trained in loyalties to persons toward whom, as their immediate and earliest sources of gratification and affection, their loyalties naturally tend to develop. As they grow up, they do not have to acquire new ones which may conflict with or obscure the old loyalties.

For the boy, this line of loyalty to those who fed and protected him as a baby may go unbroken through his whole life. The girl who leaves her own family for her husband's household has her loyalties disrupted, but the situation and the roles of various family members in the new home are usually a replica of those she has known. She has to exchange parents for parents-in-law, but whether she succeeds in transferring her loyalties is a matter of personal circumstance and not one of changed social requirements.

Both boys and girls grow up in the certainty that they themselves will some day take over the roles of those to whom as children they are most closely attached. There were in the Papago social system no officially sanctioned aims which were opposed to or superimposed upon becoming a father or a mother. Being a dreamer, a visionary, or a medicine man was not an aim but a compelling gift from the supernatural, and people who received this gift normally combined it with raising a family, using it as source of extra income, just as they do today. The "light woman" and the *berdache* (the man who dressed [838]
and behaved like a woman)[2] were relatively rare but socially tolerated deviations from the normal pattern of fatherhood and motherhood, and they were not set up as goals. Even today any other goals than being successful fathers and mothers are importations from an alien culture.

Still another factor which probably eases relationships between parents and children, and particularly the identification of the boy with his father and of the girl with her mother, is the virtual absence of the idea of personal achievement and progress in Papago culture and child-training. The individual child, and each generation of children, is not encouraged to outdo his parents and grandparents but to become like them. This stability of tradition helps eliminate friction and conflicts which occur between parents and children with different aspirations and values.

Thus, among the Papago, identification with the parents is highly desirable, undisturbed, and favored by social conditions. These same conditions which require from the child gradually increasing co-operation modeled exactly after

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[2] There were no female transvestites (see Ruth Underhill, *Social Organization of the Papago Indians*, pp. 16–87).

157 593 the living and working pattern of adults, particularly of the father and mother, will to a certain degree prevent children from maintaining infantile ties as they grow up. Identification will slowly be guided toward, and become, self-lived reality. Variations in emotional attachment and interpersonal disturbances may be assumed to be based largely on individual experiences and personality constellations within different families.

These conclusions suggested by cultural studies are borne out by the test results obtained from Papago children. In none of the other Indian tribes (or among midwestern white children) are the boys' pleasant emotional references so concentrated around their fathers or the girls' around their mothers. The difference by which pleasant experiences of Papago children with their parents outweigh the unpleasant experiences is the highest found in any tribe except the Navaho. The deep influence exerted by both parents and the high regard which the children have for their discipline are most clearly reflected in the western Papago children's answers to the Moral Ideology Test, which also show the father's relatively greater restrictive power in this moderately patriarchal society.

157 578 593 The only signs of potential hostility toward specific members of the family by an appreciable percentage of Papago children and which therefore may be inherent in Papago social organization are in the children's attitude toward their brothers and sisters, particularly toward those of the same sex. Brothers and sisters are far more often connected with unpleasant emotional experiences than are parents. Especially in incidents which rouse the children's anger and indignation, the difference between the amount of provocation attributed to brothers and sisters, on one hand, and to the parents, on the other, is very striking.

Such results suggest that the rules of seniority may in fact not always be accepted without difficulty and may themselves be an irritating institution. However, the girls relate their sisters at least as often with pleasant as with unpleasant emotions; it is the boys who show hostile feelings more clearly. Quite conceivably they are exposed to uncontrolled pressure from their older brothers while working in the fields in the father's absence, while the girls, staying around the house, are under more constant supervision by their mothers and grandparents. The test results also show that the boys ascribe functions of discipline less to parents and more to various other family members than the girls do. That difference in exposure may indeed influence the relationship between siblings is further supported by the findings that only the boys recall frightening experiences caused by their brothers, while the girls seem to be free from fear of both brothers and sisters.

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157 578 593 The Thematic Apperception Test, too, reveals similar signs of interpersonal disturbances. The interpretation of its results, without differentiating between the attitudes of boys and girls, states that the establishment of a functional relationship between brothers and sisters may be a point of conflict.[3] But this conflict seems to be only temporary and apparently does not hamper adult adjustment.

157 571 Papago boys, who have more opportunity for activities and personal contacts outside the family than their sisters, more frequently mention nonrelatives in connection with happy experiences than do the girls, who connect most such experiences with members of the family, their usual companions.

Very little was learned from the tests about the emotional relationship between boys and girls outside the family. The Rorschach and the Thematic Apperception tests reveal on the average only slight sexual anxiety in adolescent children. In the Emotional Response Test, age mates of opposite sex were not mentioned once in connection with pleasant memories, though there was some mention of them when unpleasant occasions were recalled. Boys and girls, but particularly the former, acknowledged being ashamed (i.e., embarrassed) in front of the other sex, and a few boys admitted getting angry at girls. But this is all we learn.

157 581 So far as observations and reports indicate, Papago marriages are normally stable. Fidelity of husband and wife seems to be quietly assumed. Courtship and the selection of partners as they take place at present are little restrained by family authority, except in cases of close relatives, as of first cousins, in which event the match is condemned or at least considered undesirable. Romantic love, however, is not one of the important concepts and values in Papago culture. The emotional value of the relationship between man and woman seems to be viewed almost entirely from the aspect of their adjustment to the Papago ideal of family unity: husband and wife are considered enviably happy if they have many living and healthy children, if they are industrious, and if they co-operate peacefully and harmoniously with each other and with the rest of the family. Mutual loyal attachment apparently is conceived and officially sanctioned as growing out of just this active participation in and adjustment to the physical and spiritual needs of the family group and not as developing from the perpetuation of two people's passion. A marriage based mainly upon these values is likely to remain stable and relatively undisturbed, even when there are extramarital sex relations.

157 836 Boys' premarital love affairs are considered natural and may be an occasion for joking and teasing on the part of adult relatives; but, if the affair appears

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[3] Henry, op. cit., p. 3.

157 836 to be a prelude to marriage, it may concern parents if the partners are unsuitable. For girls to have casual affairs before marriage is not the ideal pattern, but it is not deemed a bar to honorable marriage later on. As an *emotional* condition, a love affair has no cultural value. It is not a situation to be admired or condemned, to talk or make songs about, but a private affair of the lovers with a generally acknowledged value only if it is incorporated into a family group.

157 571 How far the whole complex of Papago magical thinking, of fears of the supernatural, and of the corresponding trend to retire into dreamlike seclusion may constitute a cultural reaction to specific difficulties in interpersonal relations cannot be inferred from the results of the tests. No general and clearly directed hostilities have come to light in the answers obtained from Papago children, except the rather mild conflicts between siblings of the same sex. Considering the slight formalization of the magico-supernatural complex, which at the individual's will may or may not be evoked for the instant's need, it seems likely to be at once the reaction of man to the numerous threats and dangers found in this particular desert life and to individually varying tensions arising from close and necessarily family-bound interpersonal contacts. Only a careful exploration of the numerous symbols and manifestations of the supernatural and their interpretation by the Papago themselves, as well as a psychological study done with the same objective, could give us a clear answer. Such methods might reveal, for instance, the psychological significance of the old Papago custom (which is still practiced in some families) of strictly segregating girls and women during the menstrual period because of their alleged power of evil and destruction at that time. With our present limited knowledge, we cannot say how far this custom is an integral part of the ancient magical fear of death and blood and how far it may, for instance, have developed as a social device for the psychological management of women and for the conservation of men's working and fighting strength through periodic sexual restrictions. It can, however, be noted from the Emotional Response Test that present-day Papago boys do not connect frightening experiences with girls, be they sisters or age mates.

Chapter XIX

PAPAGO CULTURE AND WHITE

AS DISCUSSED in chapter ii, the basic life-patterns of the Papago were little influenced by white culture from the time the Spaniards first encountered them on the desert to the end of the nineteenth century. The Spaniards and Mexicans gave the Desert People domestic animals, new foods, implements, somewhat improved agricultural methods, and a glimpse of Christianity, but they left their social institutions fundamentally unchanged. 177

During the last forty years, with the establishment of permanent Christian missions in Papaguería and the creation of the Papago Reservation, the Papago have been exposed to alien forces more constant and powerful than any they had previously encountered. This pressure has not been in the form of open hostility, as was that of the Apache; it has been exerted chiefly through the introduction of new values and the more or less complete reinterpretation of values already functioning in Papago life. Most white aliens have demonstrated either openly or by implication a firm assurance that their values are the only right and decent ones, the sole ways to happiness, and are thus far superior to any which the Papago could possibly have. The Papago, though they probably cherish notions of the same kind about their own values, have been at a decided disadvantage because the white strangers are in control of the situation.

It is not surprising that, particularly during the first period of peaceful conquest by modern American civilization, the Papago showed various and changing signs of resentful hostility and resistance, on one hand, and of a more or less far-reaching acceptance, on the other. Similar signs accompanying adjustment to an alien culture may be observed in all Indian tribes studied in this project. But each group reveals its own reaction pattern, according to the differing socioeconomic organizations of the tribes, the varying strength, quality, and elaboration of their cultural values, and their diverse experiences with the encroaching forces. 177 578

The main areas in which the Papago people, old and young, have been

177 caught by the re-evaluation of their concepts of life may be indicated briefly
as follows:

578 1. They have been taught for ages the principles of co-operative family organi-
zation and have experienced its satisfactory functioning, which implies the
157 reliance of everyone on everyone else, the condemnation of individual aims
177 which might disturb this organization, and a corresponding modesty and
578 inconspicuousness whenever the individual finds himself in a group
situation.

White people, on the other hand, teach them by model and by implication that the individual should try to become more industrious, more clever, stronger, and in every way better than his next of kin and his neighbor; that his talents and aspirations are more important than the welfare of his family. The Papago sees that the one who has the best knowledge of English, who is quick in stating his requirements, and immodest (according to Papago rules) in his approach will have advantages denied to those who behave according to Papago custom. They observe that they are judged constantly by standards which put brother above brother, son above father, according to personal achievement. In school, the child who speaks up boldly is praised; the one who does another child's task for him is blamed. On the whole, competition and personal achievement are stimulated and encouraged much more than co-operation (as understood by the Papago).

2. White concepts of the acqusition and accumulation of personal property
157 for prestige and power are strange to the Papago, to whom personal prop-
556 erty consisted of a few objects for wear and use which were destroyed at his
177 death. Prestige and power came from the wisdom of age and experience or
from grace given by the supernatural.

Today the value of personal property is clearly demonstrated by white people in their display of clothes, furniture, and cars, in the way they spend money at the trader's, in the esteem and praise they give the Papago family with greater means of subsistence than others. The restrictive aspects of property have been demonstrated by mission and school, which accent the sanctity of personal property and the wickedness of stealing, and by government's measures to apportion and guard grazing land by districts. The value of personal property is being inculcated into the Papago by the insistent inquisitiveness of administrative employees about exactly what belongs to whom and why, and who has the right to sell a specific cow and who has not. Finally, it has been brought home to them as pay for their labor—individual wages in money for individual work, to be spent by the receiver at his own will, automatically make him the master of his property, while

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previously the Papago had known almost exclusively common payment in 177
kind for common effort.
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3. Among the Papago, authority lay chiefly in the family, not only during childhood but throughout life. Authority was conceived as growing with age and with increasing responsibility for descendants. The old men in the village council reflected only the family situation to the younger ones, who had the assurance that slowly and gradually they too would gain those privileges which were denied to them in youth.

With the advent of white civilization new symbols and representatives of authority have appeared and demanded their share of attention and recognition from the Papago. Among them are the Catholic fathers and brothers of the Franciscan Order and the men and women of the Presbyterian Mission. The functions of the Christian clergy may not be considered by the Papago very different from those of their medicine men. But, while the medicine men exert their influence exclusively upon relationships between man and the supernatural and all their active interest in temporal matters is indirect and must go through the filter of supernatural and magical concepts, the clergy have included within their sphere of direct influence such matters of morality as had previously been the concern of the Papago family.

Representatives of the white administration, whether visiting officials or 157
members of the Agency established on the Reservation, are just that many
more completely new additions to the Papago pattern of authority. They 177
do not offer any points of comparison to either the grandparents or parents, 657
the medicine man, or the old men of the village councils. In bewildering contrast, most of the new representatives are relatively young men and women, who rarely remain among the Papago long enough to demonstrate the gradual growth in experience and wisdom which the Papago always required from those to whom they granted authority. Their sphere of influence, as it is concerned with organizational and economic questions, with education and with health, cuts clearly across the old sphere of the family.

Teachers, the majority of whom are women, have become new disciplinarians for the children. Their principles and objectives of training not 157
only cover different areas of knowledge but also are often in discrepancy 177
with teachings received at home. The discrepancy may be fundamental— 875
as, for instance, regarding the favorable evaluation of competition—or it may represent a change of emphasis upon specific attitudes, as in the case of the very high value given to certain rules of hygiene in school, which often must seem to the children an implicit criticism of home conditions.

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Thus, all the new representatives of authority are or may become serious rivals of the family. Offering aims and ideals different from or even contradictory to those of Papago society and culture, they are not, at least at present, models whose authoritative position may be aspired to or achieved by any appreciable number of the Papago. This factor considerably strengthens the impression that these representatives are clearly and hopelessly superimposed from outside.

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4. Old Papago institutions are being threatened not only by new authorities which white culture has introduced but also by changes in the position of Papago children and young people brought about by the introduction of white institutions and practices. Education of children in schools rather than in homes is increasingly breaking the continuity of experience and common sharing between adults and children. It implies a new concept of childhood as a prolonged, and at the same time sharply delimited, period of preparation for adulthood. In addition to segregating children from adults over many hours of the day or months of the year, the school teaches skills such as arithmetic and a knowledge of English, which have little bearing on the common life of the Papago but are all-important for dealing with the alien culture. Thus the school experience in itself and the content of teaching tend to produce a cleavage between children and adults.

The relation of young adults to their elders is also being changed by what they have learned in school. Young people with initiative and some knowledge of the language and customs of whites are rapidly advancing to positions of importance in tribal matters. Furthermore, many of the young men and women seek wage jobs which make them independent of the family, and all wage-earners are paid on the basis of individual performance rather than for the work of a group. Both the rapidity of "political" advancement and competitive wage-earning weaken the Papago principles of gradual maturation into privileges and position and of the distribution of roles according to the physiological needs and interests of different age groups.

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5. Another concept deeply rooted in Papago culture is belief in supernatural influences, which projects intention into coincidence, correlates the unrelated, removes the barriers of space and time, and humanizes nonhuman objects and manifestations. Against this belief is now placed the Western concept of cause and effect which, on the one hand, relieves man from being simultaneously the fear-stricken victim and the unlimited master of the supernatural and, on the other hand, limits and strengthens the immediate efficiency of his power of action.

6. A moral law based on complete adjustment to the society that has developed 157
it is being confronted with a morality of personal goodness and badness 177
which does not necessarily coincide with such adjustment and may demand 577
from the individual attitudes and reactions opposed to it. With this goes
a far-reaching re-evaluation of the very meaning of goodness and badness
in the religious sphere and in that of interpersonal relations.

These are the main areas in which the Papago have been exposed to influ- 157
ences and pressures of an alien society and alien culture. It will easily be seen 177
that all these areas are closely interrelated and that efforts to make changes in
them are in effect attacks upon the totality of Papago life.

The fact that the people who carry the extremely complex white culture to the Papago country are recruited from different classes, with greatly divergent backgrounds, reactions, attitudes, and aims, certainly does not lend persuasive strength to force.

The Papago, accustomed to the relative simplicity and consistency of his own patterns of life, soon discovers that accepting the concepts of modern American civilization at face value, as they are taught to him in mission and school, throws him into conflict not only with his own culture but even with many practical demands and aspects of white civilization.

For example, the superintendent of the Agency and the teacher tell him that alcohol is forbidden, harmful, and bad; the innkeeper in town, disregarding laws or scoffing at them, offers him drinks; the white drunkards he meets encourage him to follow their example. The missionaries of both churches teach him brotherly love and the merits of purehearted poverty; but some whites may scorn him as a "dirty and primitive" Indian, and others openly demonstrate the satisfactions and power of wealth. Still other whites complain to him about the injustices they themselves have to suffer from the laws he is asked to admire. The priest points to the miracles of healing through faith in God, and the doctor insists that sickness is a matter of hygiene and "bugs," to be cured through hospitalization and sulfa drugs. Because to a minority group every member of an encroaching majority has a certain authority merely through belonging to the dominant group, independent of any personal qualifications, all these people will represent to the Papago so many models of white civilization.

What to believe and whom to trust are much more crucial difficulties to the Papago than to white people, who are conditioned to accept the intricacies and inconsistencies of their culture as normal and make a distinction between

157 177 those persons whom they believe to be representative models of their culture and those whom they consider atypical.[1]

REGIONAL DIFFERENCES IN ACCULTURATION

177 184 In a group spread thinly over so large an area as the Papago Reservation, white influence will vary greatly. Some of the test findings from western and eastern Papago children show that the pressure upon Papago society differs in extent and direction in different districts.

In the West it has been limited largely to economic factors, combined with casual influences to which the Papago visitor or temporary laborer in town is subjected or which he may easily observe; these influences are relatively free from elements of planned and direct indoctrination. Western Papago, who are mostly Sonora Catholics, have infrequent contacts with the Roman Catholic or Presbyterian clergy. Their children usually attend school intermittently. The government Agency is over fifty miles away, and relations with officials have been comparatively tenuous.

In the East, on the other hand, alien economic elements, missions, schools, and government operate with considerable strength. Here the direct influence of indoctrination upon Papago ways of life is more intense, more systematically planned, and much more constant than in the West.

157 177 184 One of the tests in the present study—the Free Drawings—was used to determine how far material attributes of white culture have taken root in the minds of Papago children.[2] If the appearance in the children's drawings of items from white civilization, such as airplanes, automobiles, and school buildings, were adopted as an index of over-all adjustment to white culture, the conclusion would be that western Papago children are not only more acculturated than those of the eastern districts but also the most acculturated of all the Indian children tested in this project. In the light of facts easily observable as to actual conditions of life in eastern and western Papago areas and in various other tribes studied, such a conclusion cannot possibly stand. However, integrated with findings from other tests, the psychological significance of the Free Drawings is convincingly clear and comprehensible.

It will be recalled that the western Papago children showed in their other tests emotional experiences, concepts of right and wrong, and basic reaction

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[1] One Papago in a sardonic mood remarked that a good deal of time and money have been spent in explaining the Papago to the whites. What is needed, he said, is some effort to explain the whites and their ways of thought to the Papago, for to most of them white manners, customs, and ways of thinking are a closed book.

[2] See Brooke Mordy, "Content Analysis of Indian Children's Drawings: A Method for Comparing Culture and Degree of Material Acculturation" (MS).

4: Joseph et al D,E-5 (1942-1943) 1949
NU28 Papago NU28

patterns which corresponded closely to the conditions of life and general attitudes observable in their communities. Their only conspicuous symptom of a trend toward acculturation lay in responses indicating the relatively great importance of property and money. The reader will also recall from the other tests that it was the boys of the western communities who placed the heavy emphasis on the value of money and property. The Free Drawings of the western boys included many more white items than did those of eastern boys. At the same time, however, western children also drew more specifically native items than the eastern children (see Table 19).

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All these findings suggest that the western area, though conserving the social organization and cultural values of the old Papago pattern, has been caught by and is responding freely to the economic and purely material advantages of white American culture. New economic experiences have not yet essentially changed the western Papago's pattern of living. Work in the Ajo mine, the principal form of wage work known to the western area, has always been intermittent. If the worker does not take his family with him to Ajo, they carry on their normal life at home, just as the worker himself does between jobs in the mine. The other source of wages—work in the cotton fields—has only recently become important in Papago economy, and it allows a close replica of the old Papago pattern: family labor, co-operation, and the sharing of experience.

TABLE 19

TYPES OF ITEMS SHOWN IN FREE DRAWINGS BY PAPAGO CHILDREN OF TWO AREAS (PERCENTAGE DISTRIBUTION)*

	WESTERN PAPAGO			EASTERN PAPAGO		
TYPES OF ITEMS	Boys	Girls	Total Group	Boys	Girls	Total Group
Recent white derivatives	49	35	42	22	25	23
Early white derivatives†	5	8	7	9	7	8
Native	16	21	19	11	15	13
Landscapes	30	36	32	58	53	55

* Data from Brooke Mordy, "Content Analysis of Indian Children's Drawings: A Method for Comparing Culture and Degree of Material Acculturation" (MS).

† These are items derived from the Spaniards, such as domestic animals, which have been a part of Papago life for so long that they are thought of as Papago.

But, though the new economic experiences have not yet altered the basic life-patterns of the western area, they may have disruptive effects. It is the men who work in the mines; and in the cotton fields wages are customarily paid to the male head of the family for work done by all its members. These facts, together with the boys' realization that they will be the chief earners, keepers, and spenders of the family income (apparent from the importance they attach

157 177 184 to it), threaten to reallocate the roles, the relative independence, and the authority of the sexes to the disadvantage of the women. Another potentially harmful aspect of cash wages is their easy convertability into liquor. The concern of western Papago children (particularly girls) over drunkenness, which is greater than that of eastern children (and indeed considerably greater than that of any other Indian children or of midwestern white children), indicates the western Papago's awareness of this problem and confirms reports and observations of excessive drinking in their districts.

Eastern children are different in some respects. In their Free Drawings the eastern children—boys and girls alike—show fewer native items than the western children, as well as fewer objects from white culture. Both sexes prefer to depict landscapes, which, being noncultural in character, do not involve commitments to either the Papago or the white way of life.

Reviewing briefly the results of the other tests, the eastern children, in comparison with those from the West, show: (1) fewer associations of family members with emotional experiences and discipline, and the attachment of more importance in these respects to nonrelatives, particularly age mates; (2) less emphasis on the parent as disciplinarian for boys and on the father's disciplinary role for girls; (3) a lower moral evaluation of family co-operation and work; (4) more frequent mention of experiences and attitudes connected with personal achievement and with aggression; and (5) with regard to the basic reaction pattern, less tendency to interpret reality subjectively, without reduction of the trend toward withdrawal, which is beginning to appear as an established introversion instead of an intermittent reaction.

These combined findings suggest that eastern children, who are more influenced by white American culture than the western Papago, are undergoing a psychological acculturation which is correspondingly deeper and more extensive. It is obvious that the findings reflect the influences of white culture and are not due to primarily intratribal differences between the western and eastern areas, for the decrease of values which (according to anthropological evidence) are elements of the aboriginal Papago culture is accompanied by an increase in concepts clearly belonging to white American culture. A good job, schoolteachers, missions, going to heaven or hell—all are such concepts of unequivocal significance. Thus the comparatively little attention given in eastern children's drawings to objects of white material culture is not indicative of a low degree of acculturation but a sign that in the East the weight of importance and interest is no longer laid primarily on material aspects of the new culture.

Though the eastern acculturation pattern is so much more complex, it does

5: Castetter & Bell N-5 (1938-1940 1942
NU28 Papago NU28
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closely related to G. *hirsutum* L. than to G. *barbadense* L. Segregation was found to be much less pronounced in the F_2 from the cross of Hopi with upland cotton *(G. hirsutum)* than from that of Hopi with Egyptian cotton *(G. barbadense)*; also there was much less sterility in the F_2 of *hirsutum* x *hopi* than in the F_2 of *barbadense* x *hopi*.

The aboriginal cotton grown by the Papago was undoubtedly the same as that of the Pima, and the indication is that the species was a variety of G. *hopi*. Although the Arizona wild cotton plant, *Thurberia thespesioides*, is found frequently in the southwestern mountain ranges in Arizona,[85] there is little or no evidence that it was ever used by the Pimans as a source of fiber. A single Papago informant, Bernabé López, volunteered the information that it was utilized.

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With work done between 1908-16 at the Coöperative Testing Station at Sacaton, the growing of Egyptian cotton in the Salt River Valley became recognized as a practicable industry. In 1912 it was shown that the Yuma variety of Egyptian cotton was suitable for this purpose, and in 1910 the Pima variety had its origin as the selection of a single plant out of a field of Yuma cotton being grown at the station. The Pima variety was not grown commercially until 1916, after the station had demonstrated it was decidedly superior in many respects to the Yuma variety, which it soon completely supplanted. The scarcity of water at a time when the cotton crop is in greatest need of irrigation has prohibited any substantial increase in cotton acreage since 1923, when the Pima crop covered 1,920 acres. The acreage is now confined largely to land regularly supplied with water from pumps in addition to the river flow. It has been ascertained that early plantings of Pima cotton are likely to be much more productive than those made after May 1, in fact the early work of the Field Station indicated that the best time

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[85] Bailey, *The Wild Cotton Plant in Arizona*; Hanson, *Distribution of Arizona Wild Cotton*.

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for planting cotton in the Salt River Valley in a normal 080 season is during the first two weeks of March.[86] Browne,[87] writing in 1874, noted the Pima planted cotton when mesquite began to leaf out (late March to mid-April), and this corresponds rather well with that of the Maricopa who planted cotton in late March.[88]

GOURDS

Kino's only reference to gourds is in a letter to him from Pi Captain Pedro de Peralta, who reported that *tecomates* Pa (gourd vessels) and other spoils which the Apache had 174 stolen in Saracachi had been recovered.[89] Velarde[90] makes 415 two references in this connection. Writing of the paucity of furniture in the habitations of Pimería, he states there were some calabashes *(calabazas)* in which to carry and hold water; also that the Pimans buried the males with their quiver and arrows, some food and a little calabash *(calabazo)* of water. These were doubtless true gourds *(Lagenaria siceraria)*. Mange[91] records that in several places in Pimería the Indians gave his party food in large chocolate cups *(jícaras)*, which were possibly gourd vessels.[92] The use of gourds by the Pima was mentioned by Whittemore in 1893, and Russell,[93] who worked among the Pima forty years ago, noted that cultivated gourds had been known to the Pima for a long time. Thus, the historical evidence indicates the Pimans had and used gourds at the close of the seventeenth century, but there is no

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[86] King and Leding, *Agricultural Investigations*, p. 5; King, Beckett and Parker, *Agricultural Investigations*, p. 24; King, *Crop Tests at the Cooperative Testing Station*, p. 10.

[87] Browne, *Adventures in the Apache Country*, p. 109.

[88] Spier, *Yuman Tribes*, p. 49.

[89] Bolton, *Kino*, I, 270.

[90] Wyllys, *op. cit.*, pp. 133, 136.

[91] Mange, *op. cit.*, pp. 249, 265.

[92] The academic translation of the term *jícara* is gourd. However, Dr. Lawrence B. Kiddle, Department of Spanish, Tulane University, has made a detailed study of the meaning of the word *jícara* in various parts of the New World, and he informs us that, as used in Mange's treatise, the term in all probability should be translated basket.

[93] Whittemore, in *Among the Pimas*, p. 54; Russell, *op. cit.*, p. 91.

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Pi Pa 1174 415 specific reference to their cultivation. Although there are no archaeological specimens of gourds known from the Piman or Hohokam cultures, both fruits and seeds of *Lagenaria* have been recovered from the Canyon Creek Ruin[94] and from Tonto Cave which are on the edge of the Piman territory (see Chapter III).

TOBACCO

Pi Pa 276 In point of time, the first tobacco smoked by the Papago and Pima was *Nicotiana trigonophylla* Dunal, known as "Coyote's tobacco." This wild species is found from the western borders of Texas to southeastern California and southward, growing in many places throughout Arizona, and in considerable abundance in northern Mexico. It is a common weed in southern Arizona desert foothills and mountains, on plains at altitudes of four to five thousand feet, on alluvial river valley soils, and is found in a number of places on the Sells Reservation. The species also occurs, although not in abundance, in central and northern Arizona at altitudes of four to five thousand feet. This is referred to by the Papago as the tobacco which Elder Brother gave them and therefore as ancient, and it is still used by them to some extent. Those Papago who could do so made expeditions Pi Pa 539 to some of the mountains in southern Arizona to secure it for their own use and for trade, particularly to the Pima who used it to a lesser extent, since, in more recent times at least, they have depended largely upon cultivated tobacco. That it was not extensively used by the Pima is indicated by the fact that some of our informants had never heard of it. It was never cultivated or even semi-cultivated, and among the Papago at least the indication is that it was smoked before they grew tobacco. Both tribes regarded it as inferior in strength and quality to common tobacco (*N. Tabacum*).

Setchell[95] refers to *N. trigonophylla* as occurring in the

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[94] Haury, *The Canyon Creek Ruin*, pls. XLVII, XLVIII.

[95] Setchell, *Aboriginal Tobaccos*, p. 413.

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lower portion of the area occupied by *N. attenuata* Torr., Pi where the latter species is the one usually employed for smoking. Pa He also identified as *N. trigonophylla* a specimen collected 276 by Dr. Edward Palmer, and now in the U. S. National Museum (no. 13478). Maxon[96] informs us that the notation on this specimen simply states it was collected in Arizona in 1885, gives no locality, and bears the statement "Used for tobacco by the Yuma Indians." Spier[97] writes of the Havasupai using two kinds of tobacco, both growing wild in the neighborhood and at least one of which was cultivated. The species known to these Indians as "Coyote's tobacco" was *N. trigonophylla*, but the other more commonly used one has not been identified. The Hopi smoked and semi-cultivated both *N. trigonophylla* and *N. attenuata*.[98]

The Pima and Papago smoked to some extent, but never cultivated, *N. attenuata*, which has a wide distribution in western North America and occurs on prairies and plains in central and northern Arizona at altitudes of five thousand to seventy-five hundred feet. We have seen vast areas spotted with sections practically covered with this plant. More recently, the Pima use of it has been confined to the boys when they wanted to "sneak" a smoke. A Pima informant referred to it as the "uncle" of cultivated tobacco. Russell[99] wrote of the Pima calling this species "under-the-creosote-bush tobacco," a statement which we have been unable to confirm; in fact, our Pima informants had never before heard this name. The "under-the-creosote-bush tobacco" of the Papago was *N. Tabacum*. The Maricopa[100] commonly used a wild tobacco known as "mesquite tobacco," so called because

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[96] Wm. R. Maxon, Curator, Division of Plants, U. S. National Museum, Personal correspondence, Jan. 25, 1940.

[97] Spier, *Havasupai Ethnography*, pp. 105, 119.

[98] Whiting, *Ethnobotany of the Hopi*, pp. 16, 17, 40, 90; Hough, *The Hopi in Relation to Their Plant Environment*, p. 38.

[99] Russell, *op. cit.*, p. 119n.

[100] Spier, *Yuman Tribes*, p. 333.

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Pi it grew beneath mesquite trees. This name was wholly unfa-
Pa milar to our Piman informants.

276 A third native species, *N. Bigelovii*, designated "Coyote tobacco," was reported by Russell as having been used by the Pima for smoking. In spite of considerable effort we have been unable to confirm the use of this species by the Pima, or even to ascertain that it grows in Arizona. Thornber[101] writes that he has heard it occurs in the state, but the herbarium of the University of Arizona contains no specimens of this species from Arizona. It was smoked to some extent by the Arizona Indians, but where they secured it has not been ascertained although its distribution would indicate they may have obtained it from the Indians of southern California, just as the Maricopa[102] got tobacco by trade from the Akwa'ala in Lower California.

Pi Both Papago and Pima are known to have cultivated the
Pa common tobacco, *N. Tabacum* L., for a number of years,
276 although it has been impossible to ascertain when or where
249 they first obtained it. Emory,[103] who visited the Pima in 1846, and Bartlett, there in 1852, both mentioned Pima crops but neither made any reference to the cultivation of tobacco. However, Browne[104] wrote in 1874 of its being raised by the Pimas, who planted it when the mesquite trees began to leaf out. Also the Papago at San Xavier, as well as the Pima at Sacaton, are known to have been growing *N. Tabacum* in 1903;[105] and Lumholtz,[106] writing in 1912, referred to the Papago cultivating tobacco. Gray[107] says the "Yaqui tobacco" found cultivated in Arizona by Dr. Edward Palmer, and specimens of which were grown in the Botanic Garden of

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[101] J. J. Thornber, Personal correspondence, Feb. 13, 1940.

[102] Spier, *loc. cit.*

[103] Emory, *Notes;* Bartlett, *Narrative*.

[104] Browne, *Adventures in the Apache Country*, p. 109.

[105] Thornber, *loc. cit.;* Lloyd, *Aw-aw-tam Indian Nights*, p. 58.

[106] Lumholtz, *New Trails*, p. 52.

[107] Gray, *Synoptical Flora of North America*, II, pt. 1, 241; C. A. Weatherby, Senior Curator, Gray Herbarium, Harvard University, Personal correspondence, Feb. 28, 1940.

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Harvard University in 1871 from seed furnished by Palmer, Pi
probably belongs to *N. Tabacum* var. *undulata* Sendtner. Pa
Informants said the Papago had always raised tobacco, also 249
that corn and tobacco are of equal age on the earth. However, 276
one Papago informant, seventy-seven years of age, said that when he was a little boy his grandfather used to smoke "Coyote's tobacco" *(N. trigonophylla)*, but also had the common "Mexican tobacco" which they got from Mexico by trade for deer skins. It seems quite certain that *N. Tabacum*, north of Mexico at least, was unknown in aboriginal use.[108]

N. Tabacum, referred to by the Papago as "under-the-creosote-bush tobacco," is also spoken of as "real tobacco." It is reported as the only species cultivated, and informants said that in early days almost every family had a tobacco patch. A specimen was obtained from Bernabé López at San Pedro village under the name of "under-the-creosote-bush tobacco" and was identified by Goodspeed[109] as a pink-flowered variety of *N. Tabacum*.

Two seed samples secured from different informants were identified by Goodspeed as *N. rustica*. Informant Vanico had grown this species for many years and Manuel Lowe had grown it years ago; the latter said it was known as "Coyote's tobacco." Spier[110] reports that the Maricopa secured "real tobacco" from the Pima who cultivated it.

Leaves of the wild species of *Nicotiana*, whenever used by either tribe, were gathered, dried and stored, but generally not mixed with the cultivated tobacco. They preferred to smoke the cultivated tobacco, but when it was not available would smoke the wild species. However, when the supply of common tobacco was nearly exhausted it might be mixed with the wild species. For the most part the Pima, and to a

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[108] Setchell, *op. cit.*, p. 401; T. H. Goodspeed, Professor of Botany, University of California, Personal correspondence, Jan. 30, 1940.

[109] Goodspeed, *loc. cit.*

[110] Spier, *loc. cit.*

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Pi lesser extent the Papago, now secure their tobacco from the
Pa whites and rarely grow it.

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276 The Papago and Pima seldom smoked by itself any wild plant other than *Nicotiana*, nor did they usually mix any wild plant with tobacco to dilute it or to economize, for they liked it strong. However, a lichen known as "earth flowers," which grows on mountains in southern Arizona, was occasionally dried and a small amount mixed with the tobacco. We were unable to secure a specimen of this plant; the one secured by Underhill several years ago and seen by the authors was not in condition to make determination possible. It now seems certain from our investigations with both Papago and Pima informants that this is not the *pihol* flowers referred to by Densmore.[111] One professed to be acquainted with *piholt*, described as a desert plant which when in bloom smelled something like "earth flowers." The lichen used was described by our informants as having a strong sweet smell, being somewhat narcotic and of such magical properties that smoking a little of it mixed with tobacco would attract game while hunting. One informant said sometimes dried tepary leaves were mixed with tobacco, the smoker expressing a wish for a large crop of teparies next season.

Pi It has been impossible for us to determine the antiquity
Pa of tobacco smoking or cultivation among the Pima-Papago.
276 The early documentary material is strangely silent as regards
174 both its cultivation and smoking, although it makes frequent mention that these Indians were extremely glad to receive gifts of tobacco.[112] Moreover, archaeology throws no light on the problem among the Hohokam and Piman cultures. Pertinent to the situation along the middle Gila, however, are specimens from Casa Grande National Monument. In 1935 reed pipes from this site were sent for examination to the Ethnobiological Laboratory of the University of Michi-

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[111] Densmore, *Papago Music*, pp. 210-11.

[112] Coues, *On the Trail*, I, 106, 109; Bolton, *Anza*, III, 18, 332; IV, 44.

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gan by Charles R. Steen, Ranger. Jones[113] reported that these pipes (as well as others taken from a ceremonial cave on Camelback Mountain near Phoenix) were made of reed grass *(Phragmites communis)*. The pipes from Casa Grande were wrapped with cotton cloth, and both lots were stuffed with leaves of creosote bush as well as broken tobacco leaves. Jones is of the opinion that these are probably leaves of *N. attenuata*. In this same connection it is interesting to note that Fewkes[114] found large numbers of "cane cigarettes" in various rooms at the Casa Grande ruin as well as in caves near Superstition Mountain to the north of the ruin. Of special interest is the fact that he found a small dish of *N. attenuata* in one of the ruins at Casa Grande.

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It is our firm belief that neither Papago nor Pima cultivated any kind of tobacco aboriginally, a situation in agreement with that for the Maricopa[115] who were adjacent to the Pima on the Gila, but that they did smoke the wild *N. trigonophylla* and *N. attenuata*.

MARTYNIA

Pima and Papago anciently utilized the pods of devil's claw or unicorn plant *(Martynia louisiana)* in basketry. Although informants asserted that the Pimans cultivated this plant a very long time ago it is impossible to establish this definitely. It is possible that aboriginally they utilized only wild plants of *Martynia*, and that its cultivation came with the commercial stimulus to increased production of baskets.

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There were two kinds of devil's claw—a black-seeded variety which grew wild, and a cultivated form with longer pods and white seeds, the longer strips of epidermal tissue being more suitable for making baskets. The white-seeded variety never grew wild but often appeared as a volunteer in cultivated fields.

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[113] Jones, *Ceremonial Cigarettes.*
[114] Fewkes, *Casa Grande*, pp. 142-43.
[115] Spier, *loc. cit.*

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Wheat and Barley

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There is indication that wheat, which in some places had kept ahead of the frontier of Spanish settlement, had been received from the south by the Pimans of the Gila Basin before Kino's arrival in Pimería Alta in 1687.[116] Of all the Old World crops introduced among the Pimans, wheat has been of most importance in their economy. This is especially so because it came as an off-season crop, ripening in May when the fall harvest of maize, teparies and pumpkins was exhausted, and before the giant cactus harvest.

Kino himself distributed considerable wheat seed among the Pimans, and it is clear that the Pima quickly began to cultivate it in such quantity that it soon replaced maize as their leading crop. Anza,[117] writing of a Pima village on the Gila in 1774, said their fields of wheat were so large that "standing in the middle of them, one cannot see the ends, because they are so long. Their width is also great, embracing the whole width of the valley on either side . . ." Although this picture is unquestionably exaggerated, that they did grow large amounts of wheat is substantiated by Garcés. In 1858, the first year of the Overland Mail Route, a 100,000-pound surplus crop of Pima wheat was purchased by the Overland Company; in 1859, the Pima sold 250,000 pounds; in 1860, 400,000; in 1861, 300,000 pounds and in 1862 about 1,000,000 pounds to the Federal Government for use of troops operating in their territory.[118] The great quantities of wheat obtainable in the Pima country are repeatedly mentioned by the California-bound forty-niners and this was one reason for using Maricopa Wells, etc., as the jumping-off point to the Colorado. Russell[119] observed forty years ago that wheat was the principal Pima crop, in wet seasons the harvest amounting to several million pounds. In 1919 more than

[116] Bolton: *op. cit.*, I, 263; *Rim of Christendom*, p. 248.

[117] Bolton, *Anza*, I, 184; II, 240, 304; Coues, *op. cit.*, p. 107.

[118] Browne, *Adventures in the Apache Country*, p. 110.

[119] Russell, *Pima*, pp. 76, 90.

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twenty-five carloads of wheat were sold by the Pima, in addition to the quantity they consumed.[120] The Papago, however, did not bring wheat into general use until they came in contact with it in Mexico several generations ago while working there seasonally for hire. One reason for this may be that, until government wells were dug, these Indians were not able to live in the flats in cool weather, when wheat should be planted. Lumholtz,[121] writing in 1912, said it was then the most important Papago crop. On the basis of acreage, wheat continued to hold the leading place among Pima and Papago crops until at least 1924. Today it ranks second among both peoples. The growing of wheat has been established for so long a time that most of our Pima and Papago informants regarded it as an aboriginal crop, and said reference to wheat appears in their creation legends.

Definite data on types of wheat grown in our area are given by Hendry,[122] who studied the vegetal content of adobe bricks from buildings erected during the mission period. He found seeds of Propo wheat (*Triticum vulgare graecum* Kcke.) and of Little Club wheat (*T. compactum Humboldtii* Kcke.) in adobe bricks at San Cayetano del Tumacácori, in southern Arizona, founded in 1701, and at San Valentín, in northwest Sonora, founded in 1706; also California Club wheat (*T. compactum erinaceum* Kcke.) at San Valentín, in southern Arizona, founded in 1706. Hendry states that Propo wheat was found at twelve of the fourteen structures examined in southern Arizona, Sonora, Lower California and California and that it seems to have been the most extensively grown variety throughout the region during the Spanish and Mexican periods. The specimens found are uniform in type and appear to be identical with the variety as known in California today. The California Club wheat found does not correspond exactly with any of the present day club varieties

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[120] King and Leding, *Agricultural Investigations*, pp. 5, 29.
[121] Lumholtz, *New Trails*, p. 25.
[122] Hendry, *The Adobe Brick as a Historical Source.*

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and is thought to be the bearded, red-chaffed, club wheat reported by Davis[123] as having been grown in California at the time of the American occupation, and then known as California Club.

Russell,[124] who worked among the Pima in 1901-02, states they were then growing four varieties of wheat, Sonora and Australian being favorites. Twenty years ago the leading varieties were Early Baart, Sonora and Little Club,[125] and at present Early Baart, Sonora and Club comprise the bulk of wheat grown by the Pima. Sonora wheat is very drought resistant, although it makes an inferior bread flour because of the low percentage and poor quality of albumen. It is a beardless winter variety with round, very soft, white grains used largely in making such foods as tortillas. Club wheat resembles Sonora in that it is beardless and has soft white grains.

A few fields of black-bearded, hard wheat with amber-colored grain *(T. durum)*, and Polish wheat *(T. polonicum)*, a form with long, large spikes and kernels, locally erroneously called macaroni wheat, are to be seen at present among the Pima; the growing of these species seems to date back about thirty years. Arizona Baart, a soft, white-grained, bearded variety, covers by far the largest Pima wheat acreage, since this is the principal variety grown by the white settlers and seed is therefore readily available. As grown in the Gila and Salt river valleys, it is superior to other varieties in the same class in yield and bread making. The Sonora variety is still grown on a small acreage by the Pima; its yield is about equal to Early Baart but it is poorer in quality.

Although Sonora wheat continues to hold first place among the Papago, some individuals grow Early Baart. In exhibits at the Papago Fair, held every fall at Sells, Arizona, there is pure Sonora wheat, Early Baart, and many mixtures.

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[123] Davis, *California Breadstuffs*, p. 518.

[124] Russell, *loc. cit.*

[125] King and Leding, *op. cit.*, p. 25.

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A few Indians have exhibited hard wheat *(Triticum durum)*. Pa Neither Papago nor Pima have grown, nor grow at present, Pa any spring wheat to speak of, although the Papago particularly 243 are often forced to plant late in winter because of delayed winter rains, and by no means harvest a crop every year. However, yields as high as twenty-five bushels per acre have been harvested at times, and a good crop may supply sufficient wheat to last for several years. Thus Chico Bailey, a Papago informant, asserted that the best yield he ever had was one hundred sacks of wheat and twenty of barley. This fed his family for three years. Farm advisors discourage Pima plantings after mid-January. The importance of wheat in Piman economy is attributable to the fact that, in addition to being an off-season crop, it usually can be grown successfully with the moisture from the winter rains, perhaps supplemented among the Pima by one or two irrigations from river water during winter or spring freshets. Being a winter crop, wheat can often be grown successfully in the Gila Valley on soils of higher salinity than most summer crops would tolerate.

Barley, too, was cultivated by the Pimans soon after Kino's entrance into the area. In 1870 the Pima and Maricopa[126] on the Gila had issued to them ten thousand pounds of barley seed by the Federal Government. The Papago at San Xavier were reported in 1898 as very successfully growing barley for hay; in fact it was more lucrative than any other crop. Wheat and barley were the leading crops at San Xavier between 1904 and 1908. The same report for 1899-1900[127] states that barley cut for hay at this same place yielded two and one-half tons per acre, and was a more profitable crop than wheat.

Hendry[128] found in adobe bricks from the mission of San Cayetano del Tumacácori seeds of Coast barley *(Hor-*

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[126] *Report of the Commissioner of Indian Affairs* for 1871, p. 359.

[127] *Ibid.* for 1898, p. 128; *ibid.* for 1899, p. 165; *ibid.* for 1904, p. 148; Curtis, *The North American Indian*, II, 31.

[128] Hendry, *op. cit.*, p. 113.

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Pi deum vulgare pallidum typica Ser.). This is identical in type
Pa with the now widely grown variety of that name. The fact
243 that it was found in twelve of the fourteen structures studied in Sonora, Lower California, California and southern Arizona, indicates a widespread culture in the region.

At present the Pima-Papago grow two varieties of barley, Common and Vaughn. The latter, a smooth-awned sort, is characterized by its consistently high yield and stiff straw. At the irrigated area of San Xavier the leading Papago crop is barley, harvested mostly for hay. Among the Pima and Papago barley is usually planted from November to January, although sometimes as late as February, and is grown almost entirely for pasturing cattle; this begins about six weeks after the crop is planted. Early sown barley, as well as wheat, sometimes has been reported as damaged by late frosts at San Xavier and on the Gila.

WATERMELONS AND MUSKMELONS

Pi Of the Old World crops introduced among the Pimans,
Pa watermelons originally ranked very high in importance. That
244 their cultivation in places preceded Kino's arrival is clearly shown by the fact that in the fall of 1698 he encountered a group of Papagos at the village of San Angelo del Bótum (present day Cocklebur) who were growing watermelons, "although never in that village or in the others of this vicinity and coast had there entered another white face or Spaniard."[129] The culture of watermelons long since has become so thoroughly established among the Pimans that all our informants regarded them as aboriginal.

The significance of watermelons in Piman economy may be attributed to two things: their extreme fondness for them, and the fact that they may be stored until well into winter. Russell,[130] in 1902, observed that watermelons were among the most important crops of the Pima, who ate them at least

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[129] Bolton, *Rim of Christendom*, pp. 397. 400-01.

[130] Russell, *op. cit.*, p. 75.

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six months of the year. Today their cultivation is general throughout our area, and even the Papago are able to grow them under flood-water farming on the desert since they have varieties which are rather drought resistant. Informants said they could not have gotten along without the watermelon.

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The earliest watermelons of which the Pimans had knowledge were of two kinds, one with pinkish, the other with black, seeds. One was spherical, about eight inches in diameter, of light greenish-gray color with broad stripes of darker green. The flesh was pink. The second was an oblong melon with white skin and pink flesh. Informants also spoke of an ancient yellow-fleshed variety. The common sort today is the spherical striped one, although occasionally modern varieties are seen. The Pima are still heavy growers and consumers of watermelons, damage from aphids being the limiting factor in their production. Varieties which do well at the Coöperative Field Station are Klondike, Striped Klondike, Angeleno, Klekley Sweet, Chilian, Irish Gray, Tom Watson, Stone Mountain and Georgia Rattlesnake.[131]

Indications are that the Pimans received muskmelons at essentially the same time they did the watermelon. Mange,[132] in company with Kino, wrote in 1697 that the Indians at San Agustín de Oiaur harvested muskmelons and watermelons *(melones y sandias);* Anza[133] also reported them. However, the Pimans have never been fond of muskmelons, and this, coupled with unfavorable keeping qualities, is responsible for their lack of popularity. Some informants regarded the muskmelon as pre-Spanish, others held the opposite view. Russell[134] observed in 1902 that the Pima extensively raised muskmelons, but they are little grown by either the Pima or Papago today.

The oldest muskmelons were said to be of two sorts: an

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[131] King, Beckett and Parker, *Agricultural Investigations*, p. 56.
[132] Mange, *Luz*, p. 256.
[133] Bolton, *Anza*, II, 18, 147.
[134] Russell, *op. cit.*, p. 77.

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P. Pa 244 oblong fruit about twelve by eight inches, smooth skinned and not grooved. The surface was finely mottled light green, with greenish-white flesh. The other was ovoid, about twelve by six inches, smooth skinned but grooved lengthwise. The surface was a lemon yellow color, flesh rather cream colored, but not so good in flavor as the first. Both kinds were seen in Papago villages. At one village we found a third type of muskmelon unlike any we had ever seen. It was three and one-half inches long, two and three-fourths inches thick, burnt orange in color, with yellow stripes, and of excellent odor and flavor.

COWPEAS, CHICK PEAS, LENTILS AND GARDEN PEAS

Although the Papago and Pima have grown the black-eyed bean or cowpea *(Vigna sinensis)*, the chick pea or garbanzo *(Cicer arietinum)* and the lentil *(Lens esculenta)* for a long time, and many consider them as aboriginal, they are Old World crops brought in by the Spaniards by way of Mexico. All three are still in cultivation among a number of Pima and Papago families. Both the small and large forms of the cowpea were and still are grown, although both tribes obtained the small variety first. Solid black seeds of this small form without any spot sometimes occurred, but these merely appeared among the black-eyed ones and rarely were grown as a separate variety; in fact, they were usually discarded entirely even in cooking. One Papago informant said they formerly grew a cream-colored cowpea with a brownish eye. We found in cultivation among the Papago a reddish-brown cowpea with a large white spot located at one end of the seed and not around the hilum as is the case of the ordinary black-eyed pea. This is a hybrid form which breeds quite true to type. Both Pima and Papago grow the garden pea *(Pisum sativum)* on a small scale at present.

The Windsor bean *(Vicia faba)*, also known as broad, horse or Scotch bean, was not grown by either people and none of our informants had ever seen it.

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CHILI

Chili *(Capsicum annuum)* was introduced among the Pimans by Kino[125] toward the close of the seventeenth century, but its cultivation was not taken over extensively. Only a few Pima grow it at present and it is cultivated by the Papago only in very favorable places. The chief variety grown is Anaheim. Pi Pa 244

Aboriginally, and even to the present, the Papago and Pima have used fairly extensively for seasoning the native, spherical, small-fruited, but very pungent, Bird Cayenne or Spur pepper *(Capsicum frutescens* var. *baccatum)*, commonly known in the Southwest and in Mexico as *chiltepiquin*,[126] which grows wild in moist places in the Baboquivari Mountains and southward in Sonora. It did not occur in Pima territory but was secured by trade with the Papago. It was never cultivated by either people. Papago made expeditions to secure *chiltepiquin;* they pulled up the entire plant which they brought home for drying, then picked the fruit and stored it in a sealed olla. They always arranged to have some on hand. Its early use in Sonora was described by Pfefferkorn.[127] Pi Pa 222 263

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[125] Bolton, *Kino*, I, 122-23, 204, 248-49, 253, 321; II, 80, 100, 138, 165, 265.

[126] Also spelled *chiltipiquin, chilepiquin, chiltepin* and *tschiltipin.*

[127] Pfefferkorn, *Beschreibung der Landschaft Sonora*, I, 62-3.

5: Castetter & Bell N-5 (1938-1940 1942

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CHAPTER V

SELECTION, DEVELOPMENT AND OWNERSHIP OF LAND

SELECTION AND LOCATION OF CULTIVATED LAND

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Selection of land by the Gila Pima did not present a difficult task, for the bottomlands of this river rather generally consisted of fertile soil, the main problem being to choose land which could be irrigated easily from the canals yet was not too low to drain readily. The soil at Sacaton is of uniform texture to a considerable depth, a sandy loam composed largely of fine sands and silt from the weathering of adjacent mountains. When first cleared of native vegetation it is deficient in organic material, although the large quantity of silt increases the water-holding capacity, and it responds very readily to methods of improvement. This soil is representative of considerable areas extending in narrow strips along the Gila, which are well adapted for farming when not impregnated with soluble salts.[1]

Comparatively little choice was exercised by the Pima in selecting soil either in general or for particular crops, although sandy soil was preferred for watermelons. Good land was indicated by its black color and a vigorous growth of wild plants, and these Indians, of course, knew that such soil was richer and had greater water-holding power than soils of lighter color, and that corn, for example, would have smaller ears on light, sandy soil. Practically the only additional caution to be observed in soil selection was the avoidance of land high in salinity. The Papago were little troubled with this, but the bottomlands of the Gila (and Salt) were in places heavily impregnated, a common characteristic of irrigated soils. This was observed on the Gila even in Mange's

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[1] King, *Crop Tests at the Cooperative Testing Station*, pp. 7, 9.

day, for he wrote that, continuing from Casa Grande toward Pi
the west, it appeared as though the land had been strewn Pa
with salt.[2] In 1871 Grossmann[3] noted that some of the soil on 311
the reservation was strongly impregnated with salts. However, 134
the Pima have long coped with the problem of salinity by repeated flooding of such land with muddy water to wash out this mineral content, and, more recently, by working manure into the soil (taught by the whites). The fact that the Pima have irrigated the bottomlands of the Gila for centuries, without finding it necessary to abandon any large sections of land due to accumulation of salts, bespeaks their ancient knowledge of how to manage the fields from this standpoint. Informants recognized saline soil by: (1) The appearance of a white incrustation on the surface; (2) tasting the soil; (3) a growth of saltbush *(Atriplex)*; (4) the sticky nature of such soil when wet, and (5) that such soil creaked when one walked on it. They also knew that deposits of salts are more abundant on high spots than in lower portions of a field; that their native crops and wheat would not do well but that muskmelons would do better on saline soil than many other crops. Seeds of various crops would germinate in such soil and grow for a time, but would either die before reaching maturity or not yield a harvest. As wheat is a winter crop in the Pima area, consequently requiring less irrigation, it often can be grown successfully on soils of higher salinity than most summer crops would tolerate.

Tests at the Coöperative Field Station[4] recently have Pi
shown that the alluvial soil in the vicinity of Sacaton is Pa
adapted to many kinds of truck crops, provided the concentration 134
of salts is not too great. Also, that by turning under heavy applications of farmyard manure and cover crops, followed by growing alfalfa on the land for two or three years, it is possible to reduce the salinity to a large extent. The

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[2] Mange, *Luz*, p. 253.

[3] Grossmann, *The Pima Indians of Arizona*, p. 418.

[4] King and Loomis, *Agricultural Investigations*, p. 59.

5: Castetter & Bell N-5 (1938-1940 1942
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Pi Pa 134 organic matter and deeply growing roots of alfalfa result in looser structure and texture of the soil, making it more permeable to water and thus permitting leaching of the salts to lower levels.

The Gila Valley contains large areas covered with white incrustations of salts deposited by the evaporation of water reaching the surface from beneath. A comparison of the total salt content of surface flow with that of the underflow indicates the former contains salts varying from 39.4 to 120.2 parts per 100,000 of water, with an average of 96.3; the salt content of the underflow varies from 68 to 160 parts in 100,000 with an average of 126.6. Nevertheless the underground water at Sacaton is regarded as better for irrigation than the average surface water of the river. Examples of successful irrigation by waters more saline than the Gila underflow are numerous.[5]

Pa 311 361 A Papago village was invariably a settlement of kin, and others entered it only by invitation or marriage. The three Papago reservations comprise eleven village units, the location of which has changed very little since Kino first visited them.[6] The determinant reason is ecological, for they were located in spots which were then, as now, the most suitable for cultivation. Usually the main villages are situated in the north-to-south valleys, their daughter villages extending along the valley in both directions, and their Wells, or winter villages, located in the foothills on either side of the valley.

Pa 134 Soil in the Papago country is principally adobe, ranging from hard compact stretches, resulting from the first decomposition of lava near the mountains, to finer deposits mixed with decomposed vegetable matter on the floor of the broad valleys. With few exceptions, such as near meridian 112 at the Mexican line, where there is light, loose sand, the soil of the valley bottoms is fairly rich.[7]

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[5] Lee, *Underground Waters of Gila Valley*, pp. 61-2.

[6] Underhill, *Papago*, p. 58.

[7] Clotts, *Nomadic Papago Surveys*, p. 3.

Papago farming plots were almost without exception Pa
located at the mouths of washes,[8] where they could be watered 311
by flood water of the summer rains, and groups of relatives camped for generations at the same washes. In the Papago country every suitable plot of ground of this kind was utilized, and in many cases the plantings were necessarily very small. These pieces of alluvial land had few or no stones, and any found there were carried away in baskets to the edge of the field. They were not very particular as to type of soil, unless it contained considerable salts, for the deciding factor was the ease with which the land might be flooded during rains. Nevertheless these Indians knew that a good growth of weeds or the presence of large mesquite or paloverde trees indicated a good soil.

CLEARING THE LAND AND LAND OWNERSHIP

Since Papago land was selected primarily on the basis of Pi
its being subject to inundation by flood water, and tended to Pa
have a sparse cover of grass, it did not have heavy stands of 241
trees or shrubs. With primitive implements it was extremely difficult for either Pima or Papago to clear land of heavy growths of vegetation. Brush was first trampled, then allowed to dry, and burned, after which the roots were grubbed out with the planting stick and weeding hoe. Burning of any vegetative matter was thought to improve the fertility of the soil. Trees were known to interfere with the growth of cultivated plants because of their shade and extensive root systems, and were killed by burning brush in a shallow trench dug around the butt, never girdled mechanically. Dead trees might be allowed to stand in the cultivated fields, but usually were completely destroyed by continued burning.

Clearing new ground or old plots of weeds and debris in preparation for planting was men's work, in which women of

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[8] As used here a wash means a broad alluvial area over which the water, flowing down from the mountains in periods of rain, loses its momentum and spreads out.

5: Castetter & Bell N-5 (1938-1940 1942
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Pi neither tribe participated. There were no community fields,
Pa but families worked reciprocally. Among the Papago, these
241 family enterprises were under the leadership of a patriarchal
chief chosen by the people for life, there being but one chief
to each village. The Pima agricultural unit also was the
village, and, as Hill[9] points out, the necessity of communal
endeavor in irrigation and for protection against alien tribes
tended to solidify these village units. They were under the
control of a village headman whose office was inherited and
who was responsible only to the chief of the tribe and to
Pi public opinion.

Pa Pima habitations were not then scattered as now. Families
241 lived close together on high ground for protection, particularly
361 after Apache raids became serious, and daily went
out to work their plots as much as six to eight miles distant.
Pa During planting and hoeing periods they returned each night
to their homes, but at harvest time camped at the fields.

Pi Bringing a new tract of Pima land under cultivation and
241 irrigation required coöperation of the men in the one or
474 more districts which were to be benefitted, so as to arrange,
423 dispose and dig the ditches. Under leadership of the headmen
of the villages affected, meetings were held to plan the
work. Hill[10] has pointed out that Pima land assignments
under native custom were accomplished in two ways. When
a large tract was to be developed it involved the coöperative
efforts of individuals from one to three villages. Qualified
men first selected the land and located the course of the canal.
Then the community, under the direction of the headmen,
constructed the canal from the river to the selected area.
This completed, the men who had participated chose or were
assigned plots of land under the supervision of the headmen
assisted by an advisory body, but not all participants shared
equally. The second type of assignment concerned a single
individual. A man applied to the village headman, and a

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[9] Hill, *Notes on Pima Land Law and Tenure.*

[10] *Ibid.*

5: Castetter & Bell N-5 (1938-1940) 1942
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plot was designated for him. In both cases assigned land Pi
became inalienable property of the assignee and his heirs. Pa
Use of the land was under the direction of the patriarchal 241
head of the family, whose influence was partly inherited and 474
partly due to experience and personal magnetism, and whose 423
only coercive force was public opinion.

Our information indicates that, despite the above, any Pi
individual who wanted to and could develop a piece of idle, Pa
unclaimed land could do so without specific allotment. The 423
situation seems to be that aboriginally land was secured by inheritance or selected individually, and only more recently has allotment been practiced. Spier[11] is probably right in suspecting that distribution by allotment, similar to the Maricopa practice, dates from the time the Pima were located on the reservations.

Pima and Papago lands were considered as belonging to the tribe, although held individually. A person had the right to loan land in case he was not using it himself, but sale and, among the Papago, trade of land was unknown. In case of a loan no charge was made, and quarrels over the ownership or right to use a piece of land were settled by two men who knew the land and parties involved. Hill[12] has discussed the Pima procedure regarding the rental of lands. Neither Pima nor Papago ever resorted to pushing contests, tugs of war or stick fights to settle disputed boundaries, as did the Mohave. Difficulties over the limits of a Papago's land resulting from the washing away of the stones or stakes which marked the corners of his field were always adjudicated amicably by conference.

Personal ownership of land has been somewhat modified Pi
since post-Spanish concepts have disturbed the original situa- 428
tion. Anciently, however, title to the land was vested in men, and land was inherited essentially in the male line, although all members of the family had a right to its use and products.

[11] Spier, *Yuman Tribes*, p. 59n.

[12] Hill, *op. cit.*

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Pi 422 If a Pima died, his land was theoretically inherited by his immediate family—the widow, sons and daughters; practically, it remained intact so long as the widow lived, the rest of the family caring for it with the eldest son in charge. At her death the land was divided among the sons (although an unmarried daughter could claim her share), since it was expected the husbands of married daughters would inherit or develop land of their own. However, if a daughter and her husband were not doing well a piece of land might be given them. Sons were regarded as being under the jurisdiction of the father until his death. Upon the death of both parents, leaving a single young son, a relative took over the care of both boy and land until he was old enough to assume the responsibility himself. Women might own land, but this ordinarily applied only to widows who had no male members in their immediate families to cultivate it, and in such case it was planted for them by the nearest relatives. This was noted by Grossmann[13] in 1873. If a man and his wife should leave no children, their land was divided among the nearest relatives of both.

Pi 423 A newcomer among the Pima found it difficult to secure land, his best opportunity being to farm a piece not being used at the time by the owner. Regardless of how long he used it, however, the original owner could claim it at any time as it was still his property. If a man left the district temporarily, a relative, never a newcomer, would assume its care during his absence; if he left permanently, a relative took over the land.

Pa 421 Underhill[14] has shown that the center of the Papago economic system was the patriarchal family, rather than the individual, and must be regarded as the unit of property holding and of the extensive system of exchange of goods by gift, the Papago equivalent for trade. Of property there was indeed little; apart from land and dwelling the food produced on the land constituted almost the entire family capital. 421 An indication of spheres of authority is seen in that the husband disposed of gifts of meat and cultivated crops; the wife, of cooked food and wild crops. The chief interest of a family was in its land. An agricultural settlement, known as the Fields, had usually been discovered and settled by a family group, and was situated on a flat plain where a wash coming down from the mountain side spread its water over the level land for as much as a square mile or more. Here the group of relatives distributed the land among themselves under the direction of some man chosen as the leader, the allotments, if possible, being as much as two acres. Tillable land was to be found only in small patches, but each family had such a field. Brothers worked together under their father during his lifetime, often living in the same house and bringing their wives home to share it. On the death of the father, sons built for themselves separate houses, but often continued to share the land, and if the land were divided, it was done very informally and the brothers continued to act together in many ways as an economic unit. The eldest son sometimes farmed his father's land, or he might turn it over to a brother and develop a new plot himself. In some cases several sons kept their land together, one being the hunter, the others doing the farming. Under special circumstances a woman brought her husband to live in the family group, where he was placed on a par with the sons and given a piece of land, this being assigned to him and not his wife. However, it was rare for a Papago to live outside of his own village, except by intermarriage. Sons usually helped enlarge the father's field if land were available, and remained with him. But as the population of a family group increased, plots within walking distance might no longer be available and one of the younger men would move. Because of fear of enemies and the necessity for reciprocal help in cultivation, he often sought among his relatives for others who needed land, and together they would settle in a new and, if possible, adjacent area. No per-

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[13] Grossmann, *op. cit.*, p. 415.

[14] Underhill. *op. cit.*, pp. 43-4, 90, 94-7.

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Pa mission was needed to develop and farm a new piece of land.

421 There was no private ownership of wild plants on either cultivated or undeveloped land. In developing a new piece of ground, mesquite or sahuaro trees, because of their fruit, were never removed, but such trees were regarded as common property and any person might pick the fruit.

Destruction of Property at Death

Pi Pa 968 Unlike Mohave, the Pima, and especially Papago, could not afford to destroy all their property and goods on the occasion of death in the family; nevertheless, a considerable amount of Pima and Papago property was so destroyed. Usually the Papago house, excepting posts, was burned and most, if not all, of the individual's personal equipment buried with him. Cattle and crops, regarded as family property, were distributed among the children. Occasionally families died out, whereupon the Council, on request, reassigned their land. In the case of a number of successive deaths, the surviving members of a family group often deserted the land to prevent it, like the house, from being visited by ghosts. Since ghosts influenced only relatives, other persons might take over the land, but only by permission of the family, who always retained the right to reoccupy it if desired.[15] Our Pima informants asserted that in historic times when a man died and left a crop standing in the field, word was passed around to the neighbors to turn their horses into it. The reason was that the dead man's relatives wanted to see everything he possessed or had accomplished in his lifetime go with him. In this connection Grossmann[16] wrote, in 1871, that the Pima custom of destroying all the property of the husband at his death impoverished the widow and children.

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[15] Underhill, *op. cit.*, pp. 90-1.

[16] Grossmann, *loc. cit.*

5: Castetter & Bell N-5 (1938-1940) 1942
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FENCING

Font[17] referred to the Pima fields being fenced in with Pa
poles and laid off in divisions, but this was, of course, long Pi
after the entrance of the first Europeans into the area. Simi- 417
larly, in 1846 Emory[18] noted the fences were of sticks, wattled 241
with willow and mesquite, and Bartlett,[19] a few years later, said their fields were generally fenced with crooked stakes, wattled with brush, chiefly mesquite, although he saw, at long distances from any village, large patches of wheat which were not enclosed. Aboriginally, Piman fields were never enclosed since there were no domesticated animals other than the dog. When a Papago patriarchal family developed a new agricultural settlement, each family head secured a field to care for himself and his sons, marking its corners with large stones or stakes. The first Pima fences were of interwoven willow, mesquite or other branches, supported by cottonwood, mesquite or willow poles, and these surrounded the land of a whole community rather than individual plots. Each family knew its own lands by their characteristic borders and ditches. At present, Pima, and to a less extent Papago, fields are enclosed
with barbed wire. Pima fields were generally rectangular and Pi
arranged according to the supplying irrigation canal, and Pa
each family received a plot of the same width but varying in 241
length. Formerly the land of either a Pima or a Papago was ordinarily in one continuous strip rather than in scattered patches, although this has become modified, particularly among the Pima, due to trade and sale of land among the Indians themselves. There are a few recorded instances, however, in which a Papago family anciently owned land at two different Fields. Pima plots were contiguous, there being no vacant land between farms unless a piece were too high for irrigation or unsuitable because of soluble salts. Since floods

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[17] Bolton, *Anza*, I, 263; IV, 45.
[18] Emory, *Notes*, p. 83.
[19] Bartlett, *Narrative*, II, 233.

5: Castetter & Bell N-5 (1938-1940 1942
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Pi on the Gila, with its low gradient and adjacent plains, were
Pa ordinarily mild and not devastating, there was little or no
241 difficulty involved in the relocation of fields.

SIZE OF CULTIVATED PLOTS

It is certain that the average amount of land cultivated per person among the Pima and Papago is now considerably higher than formerly. Advent of the whites and introduction of the motive for growing a surplus for profit greatly stimulated development of additional acreages; aboriginal farming was purely for subsistence. Also, with Spanish contact the Pimans secured farm animals and this called for the cultivation of appreciably increased crops, made possible chiefly by the availability of improved Spanish implements as well as new and different crops, especially wheat and barley. Work for wages, with its concomitant extensive trade at stores by cash and barter, has so greatly distorted the original economic picture that it is now very difficult to reconstruct the ancient situation regarding land utilization; this applies particularly to the Pima. Knowledge of our informants in this respect was quite fragmentary.

Anciently, each Pima family had its own plot of ground and planted all the crops it could take care of, for then as now these Indians had a surplus of agricultural land above subsistence needs. Its size bore no close relation to size of the family but depended rather upon the amount of land immediately available, the man's industry in farming and whether or not he hunted much game. In early historic times the average cultivated acreage for the Pima family was two to five acres; for the Papago family, one-fourth to two acres (for a detailed discussion of this subject see Chapter III).

DIVISION OF LABOR

Pi The sharp division of labor between male and female
Pa among the Papago kept the two sexes in separate groups dur-
462 ing daylight hours. Season and age also entered into the

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arrangement, heavy labor invariably being done by the young, supervised by their elders. This has been discussed in some detail by Underhill.[20]

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Among both Papago and Pima, farm work such as planting, cultivating and irrigating was accepted as man's work, and was exclusively his responsibility, but gathering the harvest was woman's acknowledged task and she took over completely the job of caring for the resultant crops, although she might be assisted by men, old men particularly. In 1871 Grossmann[21] wrote that Pima women did all the work in the field except plowing and sowing. In summer the older men worked skin clothing, wove, and did the farming, assisted with the planting by young men; in winter they made rope, tools and weapons, and built houses if needed. The younger men built or repaired ditches and houses, and, in winter, fought enemies or hunted, especially deer. In some cases one man of a family was the hunter, the others caring for the land, as deer hunting involved the development of a specialized technique entailing a long apprenticeship begun in boyhood. The modern counterpart of the deer hunter is the cowboy who cares for the cattle belonging to the family. During the summer an important feminine task was gathering and preparing wild foods for storage, and seasonally women would be away from home all day securing such foodstuffs. Throughout the year, older women cooked and worked basketry, plaited mats or made netting, while the young ground corn and carried wood and water. Only the old practiced the special crafts. Relation of the sexes to the several phases of agricultural work is treated separately in the appropriate section.

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[20] Underhill, *loc. cit.*
[21] Grossmann, *loc. cit.*

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CHAPTER VI

AGRICULTURAL IMPLEMENTS

Pi Pa 241 Piman agricultural tools were few and simple, and fortunately it is still possible to find informants who carried on agriculture entirely with these primitive implements in their early manhood, thus it has not been difficult to secure accurate descriptions.

Pi Pa [224] The most important of these aboriginal tools was the digging or planting stick. It was preferably of the heartwood of ironwood *(Olneya tesota)*, but might be of mesquite, screwbean or southwestern jujube *(Zizyphus lycioides)*, depending somewhat upon what hardwoods were readily available. The aboriginal type usually was made from the branch of a large tree, but might be from a shrub. The bark was first peeled off, then at the digging end all the sapwood was removed on two sides to produce the chisel-like edge, while at the handle only sufficient of the sapwood was removed to make it convenient for grasping with the hand. The finished tool was about four feet long depending somewhat upon the height of the man who used it. It tapered slightly from the handle, about one and one-half inches in diameter, to about two and one-half inches at the digging end which was sharpened to a somewhat flared wedge or chisel-like edge, with slightly rounded corners; these soon became more rounded by use (fig. 1a). It was thus fashioned by rubbing with a rough stone, and the edge was never fire-shaped or fire-hardened since the wood selected was itself very hard. There was no foot rest on their planting sticks, nor did these tribes ever have one forked like a crutch.

This implement is very similar, except in length, to those found by Hough[1] in Tularosa Cave, on the Tularosa River, a tributary of the San Francisco, which in turn flows into the upper Gila River.

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[1] Hough, *Culture of the Ancient Pueblos of the Upper Gila River Region*, pp. 62-3.

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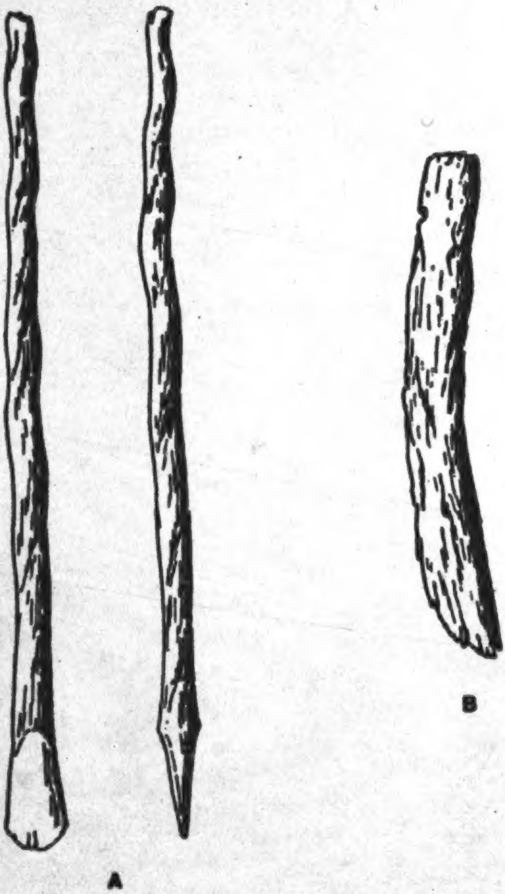

Fig. 1. Piman agricultural implements: (a) planting stick; (b) weeding hoe.

One Papago informant, Mattías Hendricks, maintained that, in his area, planting sticks used for wheat were made of paloverde *(Cercidium microphyllum)*, a rather soft wood,

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and that these were about nine inches wide at the blade and four feet long. This was obviously a post-Spanish development.

Another aboriginal farming tool was the weeding hoe, made of the heartwood of some hardwood tree, preferably ironwood, but, on occasion, mesquite or screwbean. A specimen secured from José Petero, at Silnakya, was unearthed by him in the neighborhood of that village. This was a thin-bladed, hard, heavy, sabre-shaped structure—a somewhat curved slab of the heartwood of an ironwood tree, approximately thirty-three inches long, and about five-eighths of an inch thick. It gradually extended from a width of two and seven-eighths inches at the upper end to its maximum of three and one-half inches near the knife-like edge of the convex cutting end (fig. 1b). The fashioning evidently was done with a rough stone, and the implement showed no signs of having been fire-hardened or fire-shaped. Bone, horn or stone planting or hoeing implements were unknown to both Pima and Papago.

This weeding hoe combined the functions of spade and hoe and was used for cutting weeds off below the ground line, loosening soil around cultivated plants, in preparing irrigation ditches or in digging water holes. Its length was such as to preclude a man's using it except with a sidewise scraping motion while in a kneeling or sitting position.

Russell[2] found a single specimen among the Pima, and Papago Indians offered to sell to Lumholtz,[3] who explored southwestern Arizona in 1909-10, such an ironwood "hoe," reported to have been found in a mound in the Santa Rosa Valley. Later he secured additional specimens. He also found among the Papago a simpler form of the same implement, smaller in size and consisting of a flat, oblong piece of wood with edge sharpened in a similar way, which was said to have been used by the women. That the former type of

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[2] Russell, *Pima*, p. 97.

[3] Lumholtz, *New Trails*, pp. 68-9.

5: Castetter & Bell N-5 (1938-1940) 1942
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implement was used quite early is indicated by the fact that Fewkes[4] described and figured similar ironwood implements recovered in excavations at Casa Grande.

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Russell[5] described and figured a type of wooden shovel (made of either cottonwood or mesquite), which he regarded as aboriginal and as very probably making possible the digging of not only the Piman but the ancient Hohokam irrigation canals. All our information, obtained from Piman informants, is at variance with Russell's opinion. They maintained that their shovel, almost invariably made of cottonwood, was a post-Spanish implement; moreover this agrees with the ethnological and archaeological information for Southwestern tribes in general. Informants said that, anciently in digging irrigation ditches, the dirt was loosened with the planting stick and weeding hoe, then removed in baskets. The Pima shovel of historic times was a one-piece tool of heartwood, from a cottonwood tree, felled by burning, then shaped roughly by further burning, and finally by fashioning the heated blade with a rough stone. The first shovels were shaped much like a tennis racquet, the blade, about eight inches wide, following the natural curve of the tree trunk from which it came. That crude shovels were used at an early date in the Gila Basin, however, is indicated by Fewkes'[6] finds at Casa Grande; here he recovered flat, slate implements, sharp on one edge and blunt on the opposite, identified as shovels and hoes. One or more of them were shaped like spades, an extension on one side serving evidently for attachment of a handle; others were elongate, circular or semicircular. The handle on his figure 39, however, has evidently been attached purely for the purpose of illustration. Turney[7] also wrote of the ancient extensive use of stone hoes in the Gila Basin.

[4] Fewkes, *Casa Grande*, p. 146.
[5] Russell, *loc. cit.*
[6] Fewkes, *op. cit.*, pp. 131-32, pls. 70, 71, fig. 39.
[7] Turney, *The Land of the Stone Hoe.*

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Another early post-contact Piman implement was the dibble, obtained from across the border. It might be described as the digging stick equipped with an iron blade, intermediate between the ancient planting stick and the modern long-handled steel shovel. The reader is referred to Russell's figure 10d.

Still another implement introduced among the Pima after the coming of the Spaniards was the rake. This was a primitive wooden tool about three and one-half feet long, made of a three-forked mesquite branch. The tines were strengthened by a cross-piece, then heated over a fire and their ends bent downward by fastening in the crotch of a tree, after which they were cut to a suitable length. When the rake had cooled, the cross-piece was removed. Sometimes a hay fork was made in similar manner, except that the tines were not bent and the cross-piece constituted a permanent part of the implement.

Of comparatively recent introduction into the Piman area is the wooden plow. The first Papago plow was made of a mesquite tree and its main root. This is shown in figure 2. Such plows were not common among the desert Papago as these Indians had little share in this early stage of cultivation by plow. They are extremely rare today. The plow was drawn by two rawhide strips passing back from the animal and fastened to a mesquite pin inserted through a slot in the share. The earliest Pima plow was fashioned a little more elaborately. The plow itself, consisting of share and single handle, was a piece of mesquite or ironwood to which was attached a cottonwood tongue fastened to the ox yoke; this in turn was tied to the horns of the oxen by leather thongs. The base and single handle were of one piece of wood, the latter being a branch of the tree trunk from which the base of the plow was fashioned, the share being about three by three by twenty-four inches and sharpened on the lower side. The lower side of the proximal end of the tongue was beveled to an edge, which fitted into a transverse notch at the base of the

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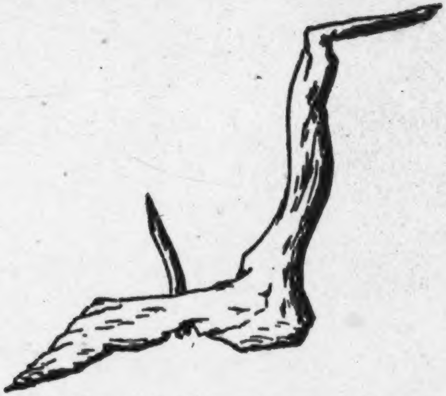

Fig. 2. Early Papago plow made of mesquite tree. (Redrawn, by permission, from Clark, *Lessons from Southwestern Indian Agriculture*, fig. 7).

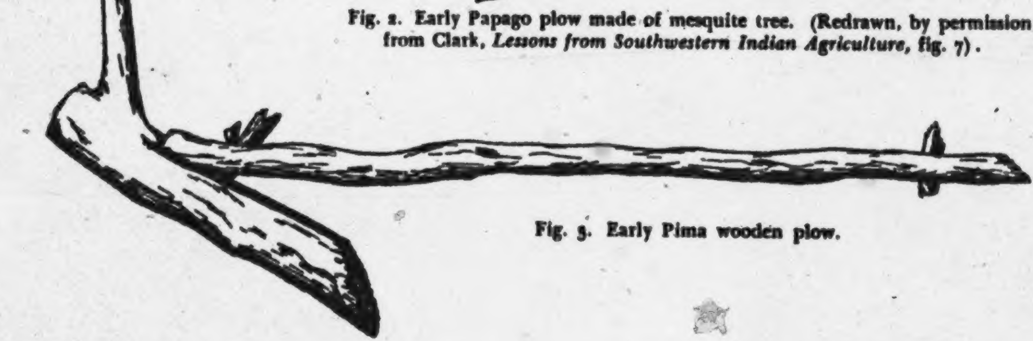

Fig. 5. Early Pima wooden plow.

[P.139]

5: Castetter & Bell N-5 (1938-1940 1942
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Pi' Pa 241 handle, then the tongue was attached to the share by a mesquite pin passing through both and kept tight by two wooden wedges. On some plows a sheet of iron or steel faced the cutting surface of the share. The plow base was oriented at a rather sharp angle, approximately fifty degrees, allowing just the point to come in contact with the soil, thus permitting only very shallow plowing, a condition necessitated by the limited strength of the plow itself. Such a Pima plow was described in 1893 by Whittemore[8] and later figured by Russell.[9] (See fig. 3.)

[8] Whittemore, in *Among the Pimas*, pp. 87-8.

[9] Russell, *op. cit.*, fig. 11.

5: Castetter & Bell N-5 (1938-1940) 1942
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CHAPTER VII

PLANTING, IRRIGATION AND CULTIVATION

THE PIMAN CALENDAR

The Piman calendar is associated with seasonal weather and the appearance and characteristics of plants and animals. The calendar month (moon) is the lunar month, thus there are twelve such periods, although their duration evidently is not precisely designated. Our information agrees with that of Underhill,[1] that there existed no standard names for months but descriptive terms for each period between one "death of the moon" and the next. Informants said the periods, or moons, began two nights before the appearance of the new moon. The Piman year began in July with the ripening of giant cactus, which was also the beginning of the rainy season and regarded as the best time of the year. The number of periods or moons in the calendar was identical with the typical number of tail feathers in the song bird—twelve.

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We were fortunate in securing the names and order for the Papago moons as Chico Bailey was fairly well informed on such matters. In this we were ably assisted by Father Bonaventura Oblasser, who was especially helpful in ironing out difficulties of interpretation, since he, too, had some knowledge of the calendar and also spoke Papago. A specific attempt was made to secure precise calendric sequence in relation to its bearing upon the agricultural picture. It was impossible to secure the Pima calendar, for our informants knew little about it, the extent of their knowledge being the names for two or three moons. Although our calendar does not equate fully with either of those given by Russell[2]

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[1] Underhill, *Papago*, p. 124.
[2] Russell, *Pima*, p. 36.

5: Castetter & Bell N-5 (1938-1940 1942

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for the Pima or with the Papago calendar of Lumholtz,[3] it does correspond very closely with that of Underhill.

The Papago Calendar

1. Sahuaro-harvest or rainy moon. Corresponds to very late June and much of July. This is the period when the bulk of the planting was done.
2. Short-planting moon (Late Planting). Planting might also be done as late as this if the ground were moist, but it meant a short growing season and the risk that crops might not ripen before frost. Equates partly with August.
3. Dry-grass moon. The time when grass becomes dry. September.
4. Frost moon. The harvest season. October.
5. Small, slight or pleasant winter. Weather beginning to get cold. Games were now held. November.
6. Big-winter or big-cold moon. The coldest period of the year. December.
7. No-more-fat moon. Deer and other game begin to get thin. Equates approximately with January.
8. Smell moon. Deer in the mountains mating and begin to smell because in heat. Also known as gray moon, because the vegetation is without leaves and has a grayish color. Late January and early February.[4]
9. Green moon. The season when native vegetation begins to get green. Approximately equivalent to March.
10. Yellow moon. Called thus because many plants now are in yellow bloom, particularly the white brittlebush *(Encelia farinosa),* creosote bush and paloverde. April.

[3] Lumholtz, *New Trails*, p. 76.

[4] A. A. Nichol, Leader, Federal Aid Division, Arizona Game and Fish Commission, has informed us in personal correspondence, Aug. 5, 1941, that the bulk of the breeding in both Arizona whitetail and desert mule deer comes in late January and early February. There is a twenty to twenty-three day spread between the climactic periods, the first not coming until after the first week in January. Thus the major portion of the rut would come early in February. Farther north in Arizona the rutting season is known to occur considerably earlier. The role of temperature in the development and maintenance of the rut in red deer has been discussed by Darling in his book, *A Herd of Red Deer*, pp. 166-67.

5: Castetter & Bell N-5 (1938-1940) 1942
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11. Painful or hunger-hurting moon. Another name sometimes used was "mesquite in flower." Crops were now exhausted and wild foods not yet available. This was before they grew wheat. May. Pi Pa 805
12. Black-seeds moon. Seeds of certain native plants were now ripe and black. June.

The Pimans had no great store of star lore but a few constellations were recognized. We found it difficult to ascertain much about such knowledge among the Pima, since informants had only fragmentary bits of information; it is much better preserved among the Papago. Observation of celestial movements in relation to their bearing upon planting time seems to have been the function of delegated individuals. Anciently, among the Pima, the headmen called the men together about six days before it was time to plant the several crops, and the individual in charge of calendric sequence told the people the time had arrived to begin planting. Pi Pa 821 805

Roughly the Pleiades (known as The Travelers) are used to indicate the seasons, calculations being made from their position at dawn. We can do no better than present Underhill's statement of seasonal sequence in this connection:

> "Pleiades rising in summer, start planting.
> At the zenith at dawn, too late to plant more.
> Past the zenith, time for corn harvest.
> One quarter down from the zenith, time for deer hunting.
> Setting, time for the harvest feast."[5]

Days were known to be of different lengths. The winter solstice—an accepted sacred period of four days—was observed and began with the first day on which the Pleiades had set at dawn.

The Papago paid little attention to relative positions of the sun, and, like Underhill,[6] we were unable to learn of any devices for such observations. The Pima depended on the

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[5] Underhill, *op. cit.*, p. 125.
[6] *Ibid.*

5: Castetter & Bell N-5 (1938-1940 1942
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Pi relation of the sun to the gap of the Sierra Estrella, the chief
Pa 821 purpose being to determine the latest period at which it was
805 possible to plant crops and have them mature before frost. Chico Bailey said his grandfather relied upon the position of the rising sun with reference to a certain point on Baboquivari Mountain to determine when it was too late to plant; also that the Papagos at Pisinemo used a similar spot in the Ajo Mountains for the same purpose.

Pi Tribal Papago traditions were passed on by word of
Pa mouth from official narrators to the youths. While these tales
538 might be told at any time upon request, particularly in winter
211 months, the creation myth was always formally and officially related during the sacred four-day solstice period. Pima and Papago annals, in reality records of important events, were kept on a stick variously notched or carved to designate special happenings.[7]

PLANTING

Time and Number of Plantings

Pi Wherever any group of Pimans anciently pursued agri-
Pa culture based upon irrigation from more or less permanently
241 running streams or springs, planting was begun as soon as
132 possible after danger of frost had passed, contingent upon an available supply of water at such time. But among all those Pimans who were dependent upon flood water from the washes the time of the single planting was governed entirely by the occurrence of summer rains, which usually began at any time from late June to mid-July. Aboriginally, groups having a rather constant supply of running water usually made two plantings, the first when danger of frost was past and the ground warm enough for seed germination, the second sometime after sahuaro harvest, depending upon the availability of water for irrigation, but rarely any later than mid-August because of danger from early frosts. Thus, in

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[7] *Ibid.*, pp. 125-36; Underhill, *A Papago Calendar Record;* Russell, *op. cit.*, pp. 34-66.

5: Castetter & Bell N-5 (1938-1940) 1942
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addition to being limited by water supply, the time of the first planting was governed by late, the second by early, frosts, these dates varying somewhat in different parts of the Piman area. In this connection, Smith[8] tells us that a correlation of altitude and length of growing season, with corrections for latitude, shows that, on the average, an increase of forty-five feet in altitude decreases the average length of the growing season by one day, an increase of one thousand feet thus shortening the season about three weeks. At Sacaton, on the Gila River Reservation, with an elevation of 1,280 feet, a twenty-one-year record showed the average date of the last killing frost in spring as March 3, the latest known date April 22; the average date of first killing frost in autumn, November 15, the earliest date of killing frost, October 28. This gives the mean length of growing season as about 263 days.[9]

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All Piman groups whose agriculture anciently depended upon flood water from washes made but a single planting, the time of which was in no way governed by a frost-free date since planting had to await the beginning of summer rains, from late June to mid-July, and thus corresponding with the end of sahuaro harvest. Such was the general Papago situation, since with very few exceptions, notably San Marcelo de Sonoita and Quitobac, their agriculture was pursued without irrigation from running streams and was therefore styled *de temporal* or "thunderstorm." A number of reports of Indian agents at San Xavier in the closing years of the last, and beginning of the present, century refer to the "so-called second crop" of these Indians. By this was meant that the wheat and barley, planted any time from November to January, was designated as the first crop; the maize, beans and pumpkins planted after the first summer rains, the second. But anciently only a single crop was planted at San Xavier. Although this village had running springs, the Santa Cruz River, upon

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[8] Smith, *The Climate of Arizona*, pp. 380, 383.

[9] *Ibid.*; King, *Crop Tests at the Cooperative Testing Station*, p. 9.

5: Castetter & Bell N-5 (1938-1940 1942
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Pc 241 which these people also depended, was dry for a very large part of the year, beginning to flow only with the onset of summer rains.

Pc 241 312 In addition to Pima planting seasons being governed by frost-free dates in spring and fall, they were limited as well by the availability of water in the Gila. Although the flow of this river at present is regulated by storage behind Coolidge Dam, the long-time monthly averages of the normal flow measured at a point above the Coolidge Dam are approximately as follows:[10]

January	50,000	acre-feet	July	24,000	acre-feet
February	52,000	" "	August	39,000	" "
March	56,000	" "	September	26,000	" "
April	56,000	" "	October	24,000	" "
May	12,000	" "	November	17,000	" "
June	3,000	" "	December	34,000	" "

To the above amounts should be added, as benefiting the area of the Gila River Reservation, the unregulated average flow from the San Pedro River of about seventy thousand acre-feet per year, most of which comes during July, August and September.

The Gila waters are thus seen to be highest at two periods, one during January to March, a second in August. However, this represents the mean taken over a number of years and it must be recognized that from year to year the monthly average fluctuated considerably. Only in flood season was the flow adequate to permit irrigation. It was not uncommon for the water in the Gila to fail completely, especially in winter but occasionally in summer as well. Russell[11] reports this happened about every fifth year, and is supported by comments of Anza, Eixarch, Font and others.[12] Such failure

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[10] L. J. Booher, Assistant Agricultural Engineer, University of Arizona. Personal correspondence, May 8, 1941.

[11] Russell, *op. cit.*, pp. 66-7.

[12] Bolton, *Anza*, III, 19, 353; IV, 45; *Report of the Commissioner of Indian Affairs* for 1871, p. 359; *ibid.* for 1875, p. 214; *ibid.* for 1878, pp. xxxix, 3.

5: Castetter & Bell N-5 (1938-1940) 1942
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either delayed or eliminated one or both of the plantings. 241
Moreover, occasional floods resulted in a similar situation, or 312
even washed out plantings that had been made. It is thus seen that although historic and traditional accounts refer to two plantings among the Pima, such, of necessity, was not an invariable procedure.[13]

Aboriginally the first Pima planting, ordinarily not limited by shortage of water in the Gila, was made after danger 241 221 of frost had passed, and the frost-free period in spring was recognized as being coincident with leafing of the cottonwood and mesquite trees, as well as the appearance of the first western white-winged dove *(Melopelia asiatica mearnsii).*[14] Cottonwoods came into leaf in southern Arizona varying from late February to about mid-March depending upon local and seasonal conditions. Mesquite never began to leaf out before the end of March, and more commonly toward the end of April, this depending upon location and seasonal conditions, being earlier on hills than flood plains. The leafing of mesquite was regarded as a more conservative and safer indication that danger from frost had passed than was the leafing of cottonwood. Hence maize was usually planted when the cottonwoods started to leaf; pumpkins, teparies, cotton and gourds when the mesquite began to turn green. That such an early planting was made in Kino's day is indicated by the fact that he wrote on April 8, 1701: "... after a sixteen leagues' journey, passing by three other *rancherias,* we arrived at that of El Tupo [about thirty miles west of Tucson], all those places also being very poorly supplied with water [evidently from

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[13] Browne, *Adventures in the Apache Country,* p. 107; Russell, *op. cit.,* p. 90.

[14] Johnson A. Neff, Assistant Biologist of the Federal Fish and Wildlife Service, informs us by personal correspondence, Aug. 2, 1941, that the migratory movements of this dove are somewhat erratic and influenced by weather conditions, the spring migration being somewhat more regular than the late summer one. By late April stray individuals appear on the Pima Reservation at Sacaton and in the Salt River Valley.

5: Castetter & Bell N-5 (1938-1940 1942
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24/springs], although the natives had already planted their crops
22/of maize, beans and pumpkins."[15]

The first Pima planting included maize, teparies, pumpkins, gourds and cotton (a single planting). Cotton was planted in late March or early April, although unusually late frosts sometimes necessitated a replanting. They knew that common beans could be nipped by frost yet leaf out again. Browne,[16] writing in 1874, tells us the Pima planted tobacco and cotton when the mesquite leaves put forth. The second planting was not made until the first had been harvested, and was sowed on the land from which the first had been removed. In this sowing, immediately after the sahuaro harvest in July, were maize, teparies and pumpkins (cushaw type only). This schedule was modified considerably with the introduction of new crops by the Spaniards. For many decades the Pima have sowed their first crop to wheat and barley from late November to early January, and this was harvested in late May or June. Then, after the sahuaro harvest in July, the second planting, consisting chiefly of maize and teparies, was made on the same land, and this crop ripened in October or November. Usually a portion of the land was sowed from late March to early April to pumpkins, muskmelons, watermelons and cowpeas, and in some cases a second sowing of these was made after sahuaro harvest. However, there were single plantings of kidney beans, lima beans and chili when the mesquite began to leaf out. A single planting of chick peas was made from early November to mid-December and one of garden peas in January.

Today the native Pima varieties of maize planted as late as August 15 will mature, but introduced sorts usually are put out from June 15 to July 15. The wheat cultivated at present continues to be of the winter type, and is put out from November to January. Pima farm advisors today discourage plantings after mid-January, although these Indians often delay and very hot weather at time of maturity reduces the crop. Barley, however, is sometimes sowed as late as February. Early plantings of winter barley and wheat at San Xavier and on the Gila were, and are, infrequently damaged by late frosts coming the latter part of March and early in April. The best yields of Pima cotton have been obtained from plantings made before May 1.[17] Pi 241 221

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[15] Bolton, *Kino*, I, 291.

[16] Browne, *op. cit.*, p. 109.

The agricultural picture for those Pimans (chiefly Papago) who pursued *de temporal* farming follows: During winter, families camped as near as possible to a permanent source of water in the foothills and moved down to their fields only after the heavy rains had begun so as to be certain that drinking water would be available. It very rarely rained before sahuaro harvest, but if rains did come during this period they caused the ripe fruit to spoil on the trees. At the onset of rains the Papago stopped gathering the fruit and began planting. Also, if it rained during the sahuaro harvest drinking ceremony this ritual was terminated, as its purpose had been accomplished. Pa 241 221

The season in Papaguería was concentrated in July and August, when almost all of the meagre annual rainfall occurred. Sporadic showers began toward the end of June, and by mid-July there were heavy thunderstorms if the season were good. It was immediately after the ground had been moistened by these rains that the Papagos did their *de temporal* planting, which was thus governed by the rains rather than season or temperature. As these rains might be local, some variation occurred in the planting season in different areas. Both Papago and Pima maintained that in early days there was always more rainfall than in recent years, the main reasons being that "the earth was younger and had greater powers and the Indians more carefully observed the rituals in those days."

July was known as the "Month of Rains," and August as the "Month of Short Planting." Plantings could be made up

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[17] King, Beckett and Parker, *Agricultural Investigations*, p. 24.

5: Castetter & Bell N-5 (1938-1940 1942
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22) to the middle of the latter period and still mature, but if the
24/ heavy rains were delayed beyond this the Papagos sometimes did not plant at all since the growing season would be too short before frost. The latest safe date for sowing maize is now regarded as about August 17; for teparies, August 20-25. Under especially favorable moisture conditions two sowings of teparies might be made, the early one after the first summer rains, the second as "short planting" in mid-August. At present this late planting period is regarded as much more desirable for common pink beans and limas, since they go mostly to stems and leaves if planted early. If no planting were done, this changed their whole plan of life. Sometimes they ate their seed corn and beans, and spent the rest of the summer food gathering; then in winter worked for the Pimas in Sonora or on the Gila, earning their food and seeds for the next year. Due to the erratic rainfall, a crop often had to be reseeded, and even then there might be no harvest. In 1927 the tepary crop had to be planted three times on some parts of the reservation.

After the first heavy rains all Papagos hastened to plant their crops in order to get them up before the soil again became dry, always beginning with maize. Ordinarily only one planting of each crop was made, but, in the event of another period of rainfall within two or three weeks, a second planting might be made if land were available.

These Indians rarely planted anything before the rains started; a few individuals might plant small patches of corn, never any other crop, in the hope that the rains would soon begin and thus give them an early source of food. This could not be risked on any large scale, however, both on account of the uncertainty of the rainy season and the possibility of floods washing out the planting.

Since the fairly widespread cultivation of wheat within the past few generations, the Papago have modified their program to the extent of sowing wheat any time from late November to February, depending upon the rains, although

Pa 241 221

they much preferred to have it in by the first of January. If sowed late the plants were short and the grains small, due to the effect of high temperature, or plants might be damaged by late frosts at the time of heading. In no case did they make more than one planting. Otherwise they continue to pursue their "thunderstorm" planting as they have always done, living at the *temporales* during the summer months only.

Method of Planting

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In the main, Pima pursued irrigated agriculture and customarily did their planting after first heavily irrigating the land and allowing it to dry out for about a week. Unless water from the Gila were available, it often happened that this one irrigation constituted all the moisture that crops received. Papago farming however was of the flood-water type, the seed being planted in moist ground at the mouth of a wash after it had been flooded by the first summer rains. The washes, usually dry for the rest of the year, were at that time filled for several hours with a torrent of muddy water which sometimes covered the flood plain to a depth of two or three inches. Here they put in their crops, knowing that even with very low rainfall a crop would mature if the rains were not too long delayed and surface run-off or sub-surface flow favorable.

Pima-Papago sowing aboriginally was done entirely with the planting stick; this continued well into modern times and several of our old informants, both Papago and Pima, have had considerable personal experience in its use. In this connection Díaz, writing in 1774 of the extensive cultivation of wheat, maize etc. by the Pimas, noted that all their fields were cultivated "with no more oxen and no more implements than a wooden stick, with which they make holes in the ground and go slowly burying the seed."[18] Informants invariably regarded ancient farming with the planting stick as superior to modern methods.

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[18] Bolton, *Anza*, II, 304.

5: Castetter & Bell N-5 (1938-1940 1942
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8: Pa 241 [883] Planting among both peoples was a family enterprise done chiefly by the man, assisted by the older children; the wife might help if she were not otherwise engaged. Often this was handled reciprocally, families helping each other, a practice rarely followed today. Díaz[19] stated that the Pima planted in common. He doubtless meant that fields were worked in common under a coöperative plan, not that fields were communally owned.

[516] Aboriginally all crops were planted in hills, never in rows or broadcast. The planter stood in a somewhat stooped position to make holes for the seeds, thrusting the stick forcefully into the moist earth one or more times, depending upon the condition of the ground, and each time pried and jiggled with the stick to loosen the dirt. The surface soil at each hill was never scraped off before digging the hole, as was done regularly by some tribes. Hills were about six inches in diameter and into the center of each he next thrust the stick perpendicularly, turning it in a wide circle to provide a hole for inserting seed. Holes for maize were four to six inches deep regardless of the type of soil, and this same depth was used for several crops. There was no deliberate attempt to loosen soil in the hill to a depth greater than necessary for planting the seeds. When planting corn, the planter, if right handed, next took one step with his left foot and made another hill just like the first at the end of his foot, making the hills about thirty inches apart. After thus digging a number of holes the planter stopped to put in the seeds, which he carried in a leather or woven cloth sack tied around the waist, meanwhile carrying the planting stick in the other hand. Some individuals dug and planted one hole at a time. In any case only a few holes were dug at a time as they dried out quickly. When two persons worked together, one dug the hills, the other dropped and covered the seeds. The planter stooped to about a foot from the ground to drop the seed, making no effort to arrange them in the hole, and im-

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[19] *Ibid.*

5: Castetter & Bell N-5 (1938-1940) 1942
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mediately covered the seeds by scraping dirt over the hole Pi
with his foot. The surface was left flush with the ground, Pa 241
the soil not pressed down. Informants stated that, using the Pi
digging stick, a man could plant about a half acre of corn or Pa
teparies per day. [461]

There was no device for making certain the hills would be in straight rows, as one learned by experience how to gauge this with the eye. When tree stumps were encountered no special effort was made to keep rows straight and the hills were staggered around them. All crops were planted with the hills in adjacent rows alternating, and in no case was the soil between the hills worked at planting time. Since no attempt was made to locate hills in the same spots year after year, this was conducive to maintaining soil fertility.

Maize was planted four to six inches deep; teparies, kidney beans, lima beans, pumpkins, gourds, black-eyed beans, chick peas, watermelons, muskmelons and cotton about three inches, since, unlike corn and pumpkins, they could not push up from a greater depth of soil; lentils were planted about one to one and one-half inches and chili merely pressed into the soil, while tobacco was blown from the hand and the surface soil then scratched with a branch. Two informants said for watermelons, pumpkins and muskmelons holes were made about six inches deep, the seed covered shallowly, leaving a depression, and the hole gradually filled in as the plants grew.

Hills and rows for the last three were located six to eight feet apart; teparies, kidney beans, black-eyed beans, chick peas and cotton, one and one-half to two feet; lima beans about three feet, and lentils about twelve inches. Maize rows were thirty inches apart; teparies, kidney beans, black-eyed Pi
beans and cotton about two feet. Pa

The Piman ritual number was four, and, theoretically, [801]
four seeds of any crop were to be planted to each hill; practically, this has long been ignored. Maize, teparies, kidney beans, black-eyed beans, lima beans, chick peas, cotton,

5: Castetter & Bell N-5 (1938-1940 1942

NU28 Papago NU28

Pima NU29

fl gourds, melons and pumpkins were planted three to five fl seeds per hill. These people knew by experience how many 241 seeds of each crop should be planted per hill, for if plants came up too thick they did not produce well.

Gourds were planted differently from other crops. Among the Pima, about four hills, each three feet in diameter, were located and prepared near an irrigation ditch and close to a tree or bush if possible so the plants could climb; otherwise a forked pole was placed in the hill for support. Four seeds were placed in each hill at a depth of two to three inches, and the hills walled to retain water. When water in the ditch was high, it was conducted to the hill and walled in; when low, the channel connecting the ditch and hill was left open, allowing water to move to the hill at will. It was woman's responsibility to cultivate and care for gourds, as they were rather looked upon as her pet crop and easy to grow. The Papago planted gourds around the base of a small mesquite tree and fenced them with mesquite poles or sahuaro ribs to keep out jackrabbits. The vines climbed on the tree and fence. Occasionally water was carried to them for they required lots of moisture. They grew quite slowly and were cultivated twice. Informants said the signs of a well-grown gourd plant were that it had a thick stem even when very young and had wide leaves. Gourds were not planted by everyone every year, but as need dictated.

Chili required more frequent irrigation than maize. Informants knew that, although it needed considerable moisture, it would die if the ground were continually wet. Hence it was not planted on flat ground but on the sides of borders[20] about eight inches apart. A pinch of seed was merely pushed shallowly into the soil with the thumb, then the plants thinned out as desired. At present, plants for setting out are usually purchased by the Pima at a greenhouse.

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[20] In irrigated areas the term border is used to designate a unit of land enclosed by a continuous ridge of earth erected to facilitate irrigation; also at times to designate the ridge itself.

5: Castetter & Bell N-5 (1938-1940 1942
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[facing p. 154]

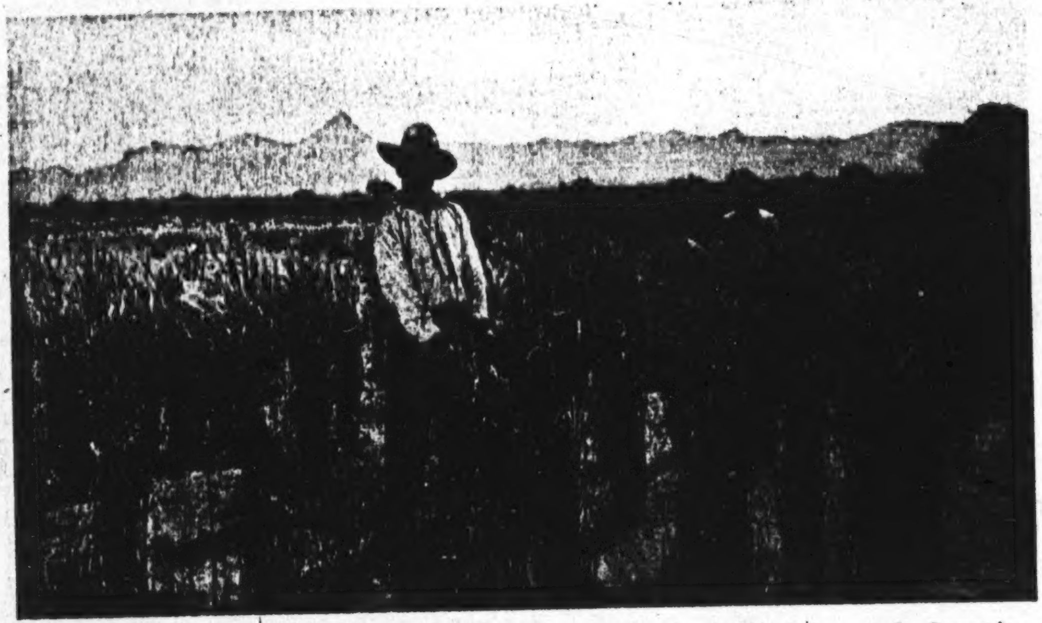

Fig. 4. Papago field of Baart wheat planted in hills and harvested by hand sickle June 2, 1926. Grown by flood-water farming near San Miguel. (Photograph furnished by C. J. King, U. S. Field Station, Sacaton, Ariz.)

5: Castetter & Bell N-5 (1938-1940) 1942
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When the Pimans first used wheat it was planted in hills Pi
like maize as this was the only method they knew. Hills were Pa
dug with the planting stick about six inches apart, the rows 241
spaced the same distance and manner as described for corn, and the ground between hills was not disturbed. One person dug the holes, another put in and covered the grains. Seed was planted two inches deep, about four or five grains per hill, and the soil in the hill left loose. Informants said such a planted field of wheat looked much as though it had been plowed. Later it was planted about fifteen inches apart in furrows made with a spatula-like wooden implement about four feet long and nine inches wide at the blade. Not until the introduction of the wooden plow was wheat broadcast, and when this was done some individuals mixed the seed with wood ashes and scattered the two together. However, some Papago, in flood-water farming, still plant wheat in hills (fig. 4).

Some soaked their seeds before planting. One cannot be certain, however, that this was an aboriginal practice. This was done particularly with flint corn and black-eyed beans, occasionally chili. The practice was resorted to especially when the first sowing did not come up, or was destroyed soon after germination by rabbits, floods etc. Some informants said when maize was soaked before planting its chief purpose was to wash off the corn odor so that the small ants which often ate young seedlings would not be attracted. Maize was known to germinate even though the soil was not very moist, but teparies, pumpkins and cotton required more moisture.

Pimans invariably planted the several crops separately in different plots and never mixed them either in the hill or plot, and any modification of this was a later development. Even brown and white teparies and the several varieties of pumpkins were planted in separate hills and plots, as were the different colors of maize in order to retain their purity.

There was no ritual planting by direction as among the Pueblo Indians.

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Prehistoric
Southwest NT3

IRRIGATION

Pi
Pc
174
312
When Kino and Mange,[21] in 1687, made their first explorations in Pimería Alta, the Pima on the Gila and the Sobaipuri in the San Pedro and Santa Cruz valleys were carrying on agriculture by means of irrigation from canals and ditches, a fact later noted by Anza (1774), Díaz (1774), Font (1775), Garcés (1776), Emory (1846) and Bartiett[22] (1848-62) for the Gila Pima.

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Haury[23] reports that the Hohokam, who preceded the Pimans in the Gila Basin, are known to have practiced canal irrigation as early as 800 (?) A. D. His excavation of a portion of the Snaketown Canal reveals the superposition of three canals, number two having been dug in part out of the sediments filling the first canal, the third channel being excavated into the silt of the second.

Pi
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Testimony of the early explorers indicates that the Piman canals formed a veritable network and were much larger and more extensive than required. Nevertheless, Haury states the maximum size and greatest scope of systems of the Hohokam canals was rather definitely reached about 1200-1400 (?) A. D. After this the systems dwindled, ending in the comparatively small but efficient Pima ones seen by the explorers of the seventeenth to nineteenth centuries cited above. These were very largely on the south side of the river. When Kino and Mange[24] first encountered the Pima on the Gila and the Sobaipuri on the San Pedro and Santa Cruz, they were carrying on agriculture by means of canal irrigation; Font and Garcés,[25] in 1775, referred to an extensive system of ditches among the Pima of the Casa Grande-Casa Blanca region, and Emory,[26] in 1846, was "impressed with the beauty, order and

[21] Bolton, *Kino*, I, 205; Mange, *Luz*, pp. 248-49, 256.

[22] Bolton, *Anza*, II, 19, 303; IV, 43; Coues, *On the Trail*, I, 107-08; Emory, *Notes*, p. 83; Bartlett, *Narrative*, II, 232.

[23] Haury, in Gladwin *et al*, *Excavations at Snaketown*, I, 57-8.

[24] Bolton, *Kino*, I, 205; Mange, *loc. cit.*

[25] Bolton, *Anza*, IV, 43; Coues, *op. cit.*, p. 107.

[26] Emory, *loc. cit.*

5: Castetter & Bell N-5 (1938-1940) 1942
NU28 Papago
Pima NU29

disposition of the arrangements for irrigation and draining 174
the land." There seems to be no doubt that irrigation on the 312
middle Gila anciently centered around what are now the Casa Blanca and Sweetwater villages. Nor is there doubt that the irrigated tracts were formerly distributed over a much larger territory and involved considerably more land than at the time of the coming of the Spaniards, this retraction of the inhabited and cultivated area becoming more accentuated with Apache pressure. Forbes[27] estimated, on the basis of Mexican tradition and an old map in the office of the assessor of Pima County, that about two thousand acres of land (not including Indian lands) were under irrigation in all of Arizona in 1854. Also, according to Rev. C. H. Cook, who began living among the Pimas in 1870, this tribe was irrigating about three thousand acres on the Gila below Sacaton in 1854. Recent reclamation projects again have brought large and intricate canal networks to the Pima area, some of which conduct water to land never before cultivated by the Indian. Haury's[28] map shows, for part of the Gila River Indian Reservation, the extensive system of irrigation canals now in use by the Pima (which are particularly striking north of Casa Blanca), old canals formerly used by the Pima, and the prehistoric Snaketown Canal; also the maps of Turney and of Forbes[29] show the distribution of prehistoric canals in the Salt River Valley. The more general aspects of Pima irrigation are covered in Chapter II of this book, and a detailed treatment of the subject is given in Southworth's[30] paper. Also, considerable information bearing on the history of irrigation among the Papago is given by Clotts and others.[31]

In the vicinity of the Gila River Reservation the gradient

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[27] Forbes, *Irrigation and Agricultural Practice*, p. 12, fig. 2.

[28] Haury, *op. cit.*, fig. 16.

[29] Turney, *The Land of the Stone Hoe*; Forbes, *loc. cit.*

[30] Southworth, *A History of Irrigation on the Gila Indian Reservation.*

[31] Clotts: *Nomadic Papago Surveys; History of the Papago Indians, etc.*; Olberg and Schanck, *Special Report on Irrigation.*

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194 of the Gila is between seven and eight feet per mile. The
32 main canal of the irrigation project, which diverts at Ashurst-Hayden Dam, on the Gila, has a capacity of twelve hundred second feet and a grade of .00037 feet per mile. The main branch of this lateral which goes to the Gila River Reservation has a capacity of about 450 second feet and has a slope of .0004 feet per mile, except for three miles of concrete-lined section which has a grade of .0045. Smaller canals on the reservation have gradients varying from .0005 to .00065.[32]

Pima and Hohokam canals were built at the expense of tremendous effort, and this is all the more striking when we realize that the dirt removed in making these ditches had to be loosened with planting sticks, weeders and flat, stone, spade-like blades (see Chapter VI), then carried away in baskets.

Ancient Pima agriculture in general was based upon canal irrigation from the river, although in places these Indians also utilized flood water from the washes, or diverted water coming from the mountains in times of heavy rains by the use of temporary dikes on the flats. Thus Bandelier,[33] writing in 1890-92, states the Pimas formerly irrigated in two ways: from the Gila by ditches; and in sections where the fertile spots lay at some distance from the watercourses or at the foot of steep mountains they dug channels from arroyos to their fields to lead the torrents coming from showers, this latter being especially true in the vicinity of Casa Blanca and toward Sierra Maricopa. Russell[34] informs us that one Pima village located southwest of Maricopa Wells depended entirely upon flood water.

The river was customarily dammed in places by the Pima to turn the water into the irrigation canals. In times of abundant flow, which occurred only following heavy rains in

[32] L. J. Booher, Assistant Agricultural Engineer, University of Arizona, Personal correspondence, May 8, 1941; C. J. Moody, Project Engineer, Personal correspondence, May 16, 1941.

[33] Bandelier, *Final Report of Investigations*, I, 254; II, 17.

[34] Russell, *Pima*, p. 88.

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the mountains, a diagonal wing was built across the entire 174 width of the river, a fact noted for the Gila Pimas by Font[35] 312 in 1775. For this purpose a place was selected at a bend in a narrow part of the river to secure greater force in the flow.

In either case the dam was made by first driving pilings of thick mesquite poles into the river bed in zigzag arrangement. For the diagonal diversion dam, mesquite branches were merely arranged among the poles, but for the cross dam, willow branches were first tied among the pilings, then arrowweed bushes were tied into bundles with mesquite or willow bark and floated against the pilings. Rocks, too, might be piled against these bundles. Tree trunks, when available, were placed in the river with stones and brush piled against them to serve as a dam.[36] Grossmann[37] stated in 1871 that, in order to force the water into their acequias, the Pima dammed the Gila at convenient spots "by means of poles tied together with bark and rawhide and stakes driven into the bed of the river. Small crevices were filled with bundles of willow branches, reeds and a weed called 'gatuna'." They rarely stood longer than a year, at times being carried away when the river rose suddenly.

Irrigation canals might run a long distance and often were as much as ten feet deep at the point where they left the river. From the several main canals branched many laterals. Grossmann[38] observed that the canals were usually ten feet deep at the dam and averaged four to six feet in width. An effort was always made to arrange ditches so that land could be irrigated on both sides of them, and ditches could be closed at the end when a higher head of water was desired. Head gates in canals were unknown. As late as 1891, it was reported[39] the Pima had no head gates and brush dams were used to stop the flow of water in the canals and ditches.

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[35] Bolton, *op. cit.*, I, 263; IV, 43.

[36] *Report of the Commissioner of Indian Affairs* for 1891, p. 217.

[37] Grossmann, *The Pima Indians of Arizona*, p. 418.

[38] *Ibid.*

[39] *Report of the Commissioner of Indian Affairs, loc. cit.*

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174 3/2 Curtis[40] tells that the Pima, from their earliest history, have grown crops by irrigation, conveying water from the river in canals; also that they did not flood the land directly from the canals, but dipped water out of the canals and carried it to the crops. It is his opinion that irrigation by flooding was learned by the Pima after the coming of the Spaniards. However, our studies indicate that flooding fields by the use of ditches and borders was definitely aboriginal; this is supported by Haury's[41] observation that on one of the terraces of the middle Gila are seen old canals and low earth ridges of the borders in areas now covered with large mesquite trees, testifying to cultivation by the Pima within early historic times. In 1846 Emory[42] observed that the Pima fields were subdivided, by ridges of earth, into rectangles of about two hundred by one hundred feet for the convenience of irrigating.

The main canals were considered as communally owned and were cleaned and kept up by all the men in a district working together. There were a number of these districts in the Pima area each under the rule of a headman, and when a dam was to be constructed the men of the districts benefited worked together to build it. In the spring, residents of each district, after an address of exhortation by the subchief or foreman, cleaned and repaired their part of the main canal, cutting off the brush along its banks and removing debris; in this several districts often worked reciprocally. In this connection, Grossmann[43] wrote in 1871 that each Pima village elected two or three old men who decided everything pertaining to the digging of canals and construction of dams and regulated the distribution of water for irrigation. Landholders were responsible individually for the lateral which irrigated their fields. Ditch work was recognized as men's responsibility, although women might help in constructing

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[40] Curtis, *The American Indian*, II, 5.

[41] Haury, *op. cit.*, I, 53.

[42] Emory, *loc. cit.*

[43] Grossmann, *loc. cit.*

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ditches by carrying baskets of dirt, a fact noted by Whittemore[44] for the Pima in 1893. Pi 174 312

The Pima leveled their fields by carrying baskets of soil from high spots to fill the low ones. Small irregularities were often leveled by flooding the fields when the river was carrying a heavy deposit of sediment.

Over a period of time the Federal Government has supplemented the supply of irrigation water among the Pima by drilling wells on the Gila River Reservation, the first experimental pumping plant having been installed at the Sacaton School Farm in 1904. The Pima do not regard this as very successful since the well water carries a fair amount of salts, and lacks the soil-enriching sediments carried by the silty flood water of the Gila which also improves sandy areas although it penetrates poorly. Despite the fact that the average salt content of the Gila underflow is greater than that of the surface flow, the underground water at Sacaton is regarded as better for irrigation than the average surface water of the Gila.[45] Pumped irrigation water has the advantages of being free of noxious weed seeds, soaks in more deeply and carries out the salts more effectively. The rather clear stored water would be preferable to both except for carrying weed seeds. Pi 312

Canal Irrigation Among the Papago

One must not suppose that irrigation was a Pima-Sobaipuri trait lacking among the Papago, and that flood-water farming was characteristic of the Papago and not found among the Pima and Sobaipuri. These peoples were one in speech and general culture, the Papago simply being environmentally differentiated Pima whose desert land presented no opportunity for river irrigation. Thus all Pimans who dwelt in areas remote from the rivers necessarily pursued flood-water farming. Moreover, as pointed out in Chapter III, in Pa 174 312

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[44] Whittemore, in *Among the Pimas*, p. 53

[45] Lee, *Underground Waters of Gila Valley*, pp. 61-2.

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174 312 those Papago areas where there were running streams ditch irrigation was practiced, and that this was done aboriginally is clearly shown by Haury,[46] who found traces of ancient canals on the Sells Reservation. One such canal runs in a straight line for seventeen miles in a west by southwest direction from Baboquivari Mountain to the vicinity of Vamori, and is dated as functional in the fourteenth century. A site excavated during the winter of 1939-40 shows a short canal about a half mile long, with strong indication of water diversion from a ditch, also evidently in use during the fourteenth century. Clotts[47] states there is evidence of prehistoric irrigation indicated by old ditches and reservoirs at Santa Rosa, and within recent times the Papago have dug irrigation canals in suitable places to conduct water to their fields. About 1914 they constructed at Cocklebur a canal three miles long with a base width of fifteen feet and a depth of four feet; at Kowlic, nine miles south of Sells, about twenty-five years ago they built a canal fifteen feet wide, three feet deep and a half mile long to take water from the wash for irrigation. Also at Quajote water is taken for irrigation from Copperosity Wash. Lands were irrigated by the Papago from the large fissure spring at Quitobaquito on the Mexican boundary as well as at San Marcelo de Sonoita, at Caborca and Quitobac.[48]

312 In the western canyons and foothills of the Baboquivari Mountains lie fourteen winter villages, or Wells, at an altitude of about three thousand feet. Of these Fresnal is a very large village, the houses extending about four miles up Fresnal Canyon. The old Baboquivari Valley village was Komalik, with its ancient winter well at Comobabi, in Sonora. However, nearer winter villages have developed in the Baboquivari Mountains, the most important of which is Fresnal.[49]

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[46] Emil W. Haury, Personal conversation, April 26, 1940.

[47] Clotts, *Nomadic Papago Surveys*, p. 82.

[48] Bryan, *Papago*, pp. 324, 407; Clotts, *op. cit.*, pp. 44, 49, 75; Davis, *The Papago Ceremony of Vikita*, p. 164.

[49] Hoover, *Generic Descent of the Papago Villages*, p. 261.

Mange[30] wrote of a flowing stream near a high, square 3/2 *peñasco,* visible for eighteen leagues, which he and Kino visited in 1699, and Bryan is of the opinion that Mange's description seems to apply to no other locality. Here many Papagos lived during the dry season, some remaining throughout the year. In 1915 there were in this canyon small enclosed gardens totaling thirty-five acres, planted to beans, melons, chili, tomatoes and corn. There are no permanently running streams, Fresnal Creek being one of the best, and it runs only for a short time after heavy rain. Part of this acreage was irrigated by water drawn from shallow wells, which up to 1915 were dug by the Indians themselves, and the rest of it was planted to early crops, matured by rainfall alone. There is no evidence of aboriginal dams, wells or other irrigation activity.[31] It is very doubtful, therefore, whether any of the irrigation in Fresnal Canyon represents an aboriginal condition.

Irrigation aboriginally was carried on at San Xavier, the only anciently irrigated village now on the Papago reservation. In Kino's day this was occupied by Sobaipuri who, during the eighteenth century, seem to have died out from some contagious disease, and the Papago have gradually moved in and cultivated their fields. Irrigated agriculture was pursued by utilizing water from springs and, later at least, the flow of the Santa Cruz. One of the sources, a spring issuing near the village and known as the Agua de la Misión, was destroyed by an earthquake in 1883, which forced this flow to the surface farther up the valley. It is now located 1.7 miles south and 0.8 miles east of the mission. The second source of water for irrigation, known as the Acequia de la Punta de Agua, is first mentioned in a Mexican grant of 1851, in which it is related that José Martínez first developed and brought water

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[30] Mange, *op. cit.,* p. 67; Bolton, *Kino,* I, 193.

[31] Clotts, *op. cit.,* pp. 52-3; H. V. Clotts, Personal correspondence, July 17, 1941.

312 upon his land.[52] This would indicate construction of an acequia, or ditch, which probably tapped seepage water at a shallow depth, and this method was continued by the digging of additional surface ditches until a large channel was cut through the level plain, making it impossible for the Indians to secure water any longer by this means. This gradually became so serious that, by 1912, the installation of pumping plants was initiated. Our one informant at San Xavier said that formerly the Papago cultivated only small patches here, that there were two springs and the water from them combined to form a stream about three feet wide and three deep, which at times filled up with grass and weeds and had to be cleaned out.

Thus aboriginal irrigation at San Xavier seems to have been carried on partly with spring water, the indication being that the Indians utilized small springs or seeps. These were supplemented by the natural flooding of the Santa Cruz, and this valley was covered with grass and mesquite as late as 1873. There was formerly no definite river channel, except probably above the dykes, and during annual floods the water spread out in a thin sheet over the valley. Hence, as rain did not run off quickly and floods were not so great in volume as later, their main effect was that of a thorough irrigation rather than of erosion and destruction.[53] Diversion of the flow of this river in flood season by means of a brush dam evidently has been a development within historic time.

It is difficult to understand Kino's statement in 1689 that at San Xavier "The fields and lands for sowing were so extensive and supplied with so many irrigation ditches that the father visitor said they were sufficient for another city like Mexico,"[54] for there is no reason to believe the cultivated

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[52] Olberg and Schanck, *op. cit.*, p. 110; Clotts, *History of the Papago Indians*, etc.

[53] Olberg and Schanck, *op. cit.*, pp. 5, 7.

[54] Bolton *op. cit.*, p. 205.

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area was very large.[85] J. M. Berger,[86] Farmer in Charge at San Xavier, in his special report, August 14, 1900, wrote that the Indians there had fully four times as many acres of land under cultivation as they had fifteen or twenty years earlier, although with a very much smaller water supply than was ever known to exist. The land under cultivation was given in Berger's several annual reports as 800 acres in 1890 (Olberg and Schanck[87] state 1,580), 950 in 1897, 1,040 in 1899, and 1,200 in 1902. After wells and pumps were installed, beginning in 1912, the following acreages are listed: in 1915, 500; in 1917, 500; in 1919, 1,500; and in 1920, 1,121 acres. On this basis the amount of land under cultivation in 1880 was approximately 250 acres, and this estimate is given credence by McDowell.[88] Our informant at San Xavier advised there is now much more land under cultivation than formerly.

The first European stimulus to increased irrigation at San Xavier occurred with the arrival of Kino at the close of the seventeenth century, but there is no indication that extensive areas were cultivated or greatly improved methods used. It was not until the more prosperous periods from 1768 to 1822 that there was any considerable development of irrigation at favorable points along the Santa Cruz near the mission of San Xavier and the Spanish presidios of Tubac and Tucson.[89]

Several factors have contributed materially toward deepening the river channel, thus rendering it increasingly difficult to utilize the water for irrigation. One is the introduction of numerous cattle into the area during the last quarter of the nineteenth century, the resultant overgrazing contributing toward erosion in the valley. As ranching became

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[85] Velasco, in his *Geografía y Descripción Universal de las Indias* covering 1571-74, p. 189, reported that at that time there were three thousand Spaniards and thirty thousand houses of Indians *(Casas de Indias)* in Mexico City.

[86] Clotts, *op. cit.*, p. 65.

[87] *Ibid.*

[88] *Report of the Board of Indian Commissioners* for 1919, pp. 67, 75, 77.

[89] Olberg and Schanck, *op. cit.*, pp. 7-8.

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more common, attempts were made to develop ground water at several points. The underground-water development which brought about the greatest damage was made by the whites about 1890, six miles below Tucson, when they opened trenches to intercept ground water. By 1912 the channel had eroded upstream eighteen miles to a point three miles inside the reservation, resulting in the destruction of about one hundred acres of Indian farm lands. A third factor was the improper methods used for securing water for irrigation during the second half of the nineteenth century. For example, development of the water source known as the Agua de la Misión caused a channel one to two hundred feet wide by fifteen to twenty feet in depth, extending about two miles up the valley. To collect the water, an earth dam was thrown across the channel, but this washed out at every flood. In 1912 practically all the irrigable land under cultivation (about five hundred acres) lay on the west side of this channel, about half of it being irrigated from a canal heading at the dam.[60]

In constructing the Acequia de la Punta de Agua a channel resulted extending from sixty to one hundred feet wide and six to twenty feet deep, and came to be known as the west-side barranca. In 1912 a ditch leading from the lower end irrigated the remainder of the five hundred acres. At that time this channel extended upstream for approximately two miles, at which point it was about twenty feet deep, and there encountered a deposit of caliche which checked erosion. In 1912 there were four canals in the vicinity of San Xavier, providing an uncertain supply of water.[61] The entire irrigation system, extant in 1912 as well as that proposed, is shown in a map in Olberg and Schanck's paper.

For some years the Santa Cruz has been a swollen flood at San Xavier during the rainy season of July and August, covering farm lands and causing much destruction, but for the rest of the year it has been a shallow, uncertain stream meandering between high banks, or at times completely dry. 312

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[60] *Ibid.*

[61] *Ibid.*

The deepening of the river channel and consequent lowering of the water table, with its decrease of available water for irrigation, beginning about 1890, gradually became worse, and, in 1908, agitation was begun to alleviate the situation. In the fall of 1912 the channel of the Santa Cruz was completely choked with sand, and a temporary pumping plant was installed two and one-half miles above the Agency to supply land on the east side of the river. The only available water other than that developed at the pumping plant was a flow from the east channel of the river, making a total sufficient to irrigate 750 acres.

During the heavy floods of 1914 and 1915 the erosion of reservation land by flood water of the Santa Cruz became so pronounced that immediate action was necessary to preserve the Indian fields. Therefore, in 1915, a long levee was thrown up, a number of wells drilled and pumping stations installed to supply the necessary water for irrigation. In 1916 the largest crop ever grown on the reservation up to that time was harvested.

As to Papago living on the Maricopa Indian Reservation just south of Maricopa, Arizona, little can be said. J. J. Grenville, Superintendent of Irrigation, in his report of April 20, 1911, makes mention of about one hundred Papagos [73] near Maricopa who were on the verge of starvation owing to two successive dry seasons, when their crops were a total failure, although they had under irrigation one hundred acres at the time of his report.

At Akchin, about three miles southwest of Maricopa, is a settlement of approximately 120 Indians who came there about 1874 from Maricopa Wells, eight miles northwest of Maricopa; their fields at Maricopa Wells had been irrigated by flood waters of the Santa Cruz, and were so impregnated with salts as to be unproductive. At the new location they supplied about 180 acres with flood water from the Akchin

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3/2 Wash, although the uncertainty of the source rendered cultivation precarious, especially in years of drought. Therefore, in 1914-15, the Federal Government drilled a number of wells, and now water for irrigation is supplied by pumping.[62]

Flood-water Irrigation Among the Desert Papago

Bryan[63] has pointed out that the usually clear distinction between irrigated and unirrigated farm land is not valid in its application to marginal lands irrigated by flood water, there being, in some instances, a complete transition. The Papago practiced an incipient sort of irrigation to the extent that their desert environment permitted. (For other aspects of Papago flood-water farming see Chapter III.) In their country the run-off of the mountain areas collected in streams with well-defined channels, which, on reaching the large undissected alluvial basins, lost their momentum and spread out in broad sheets over the level land for a square mile or more. Places where this spreading occurred were known to the Papago as Akchin, "arroyo mouth." These were favorite locations for flood-water fields, and at least six once-inhabited villages in the Papago country of southern Arizona and Sonora are named Akchin or some modification of it. In many cases shallow ditches and dykes, or wings, were constructed starting a mile or more from the fields in order to collect the surface run-off for the few acres on which they converged. Low embankments, small brush dikes and short shallow ditches were used where necessary to control, divert, distribute and retain water. At times embankments were disposed as levees, somewhat after the manner of borders around a field, to retain water until it could soak into the soil, but this was not common. For some fields water was led out from the arroyo by ditches, a deliberate effort thus being made to conduct the flood water to the fields. At present earth dikes,[64] protected in front by brush supported by stakes, are often thrown across washes to divert flood water, but there 312 is no indication that this was an ancient practice. Ditches from the wash to fields usually ended somewhere in the middle of the field, an effort being made to construct such ditches over the higher portions so the water would cover the entire plot. If there were several fields, a main ditch with several laterals was employed. A certain amount of leveling of fields resulted from the deposition of sediment by flood waters, but the bulk of it was done by carrying dirt in baskets from high to low spots or off the field entirely. As there was an abundance of water during the short time it ran, there was no need to regulate the size of ditches, hence no reservoirs or flood gates were used. Care had to be exercised to locate fields so that each flood would give them a good irrigation but not wash out the crop during heavier floods, although this always could not be avoided. Each man looked after the ditches and dikes serving his own land, but if these supplied the fields of several families the men concerned worked on them jointly. Most Papago farming villages were quite permanent, but the area cultivated might vary slightly from year to year due to erosion. However, informants said there was little of this anciently, but if there were signs of erosion in a field immediate steps were taken to stop it. Within the last thirty years the Federal Government has installed on this reservation a number of pumps to supply water for irrigation.

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[62] Clotts, *op. cit.*, pp. 83-7.

[63] Bryan, *Flood-water Farming*, pp. 444-449.

[64] *Ibid.*

Excellent examples of primitive flood-water farming are to be seen at Hardimui and Pisinemo; examples of large cultivated areas are found at Big Fields, the Santa Rosa Valley (Santa Rosa, Anegam and Akchin), Ko-opke, Topawa, San Miguel and Vamori.

At present, a method of irrigation from a *balsa* is employed in several places among the desert Papago. This *balsa* is a sort of embanked reservoir, supplied through a gate which allows water to enter from an arroyo. When filled to overflowing, a depth of about two and one-half feet, the water is allowed to go into a ditch through a gate on to the

5: Castetter & Bell N-5 (1938-1940 1942
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Pa 312 land, and it is possible to raise a crop from the water of a single filling of the *balsa*. In 1939, a planting of teparies, soybeans and cowpeas was made August 26 at Sells, under *balsa* irrigation, and a good crop resulted. Papago native corn, a milo maize, wheat and Sacaton June corn (for fodder only) have also been matured in this way. The original cost of irrigating on this basis is about one hundred dollars per acre. A modification of this system has been found among the Sand Papago, who lived in northwestern Sonora, near mountains where the reservoir was supplied from permanent springs. A ditch leading from the reservoir completely surrounded the fields, and laterals crossed them at intervals. Water collected in the reservoir during winter and early spring was released in June, before the rains began, in order to make an early planting possible. The reservoir might be filled and emptied several times during the season. The *balsa* is not aboriginal, but it has not been possible to determine whether the arrangement used by the Sand Papago is native.

Number of Irrigations

Pi 312 Among the Pima, planting customarily was done only after the ground had first been irrigated, or if already moist from rains. After irrigation, the soil was allowed to dry out for six or seven days, then planting began.

The Pima did not irrigate crops any specific number of times but carefully watched the condition of plants and soil, then irrigated accordingly providing water was available. In general, three to five irrigations were necessary to mature a crop, although because of water shortage it often happened that the heavy irrigation preparatory to planting was all the crop received. It was possible to produce fairly substantial yields of the Pima native soft varieties and Santan Yellow flint corn with only one irrigation, due to their short period of maturity and low moisture requirements. In no case, however, was a crop irrigated until it was well started and up out

5: Castetter & Bell N-5 (1938-1940) 1942
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of the ground, otherwise the plants turned yellow or would even die. It was considered advisable to keep crops well watered while making their most rapid growth and until they began to set fruit, after which they needed less. Pi 312

Papago informants said crops had to have three floodings in order to produce a good yield, two being the minimum, and that if corn, for example, did not receive two good floodings, plants on the higher parts of a field would produce no ears. Teparies were very hardy and gave a satisfactory yield with only two floodings, but pink beans were less drought resistant and required more moisture, although they would not tolerate an excessive amount. Water requirements for the various crops were seen nicely in a field belonging to Bernabé López at San Pedro village. On one high spot where it was difficult to get flood water he could produce a good crop of teparies and pink beans; these turned yellow if planted in the low spots with the corn and pumpkins. Pa 312

Pima corn needed more water than teparies. Pumpkins were usually irrigated twice before setting of fruit, after which plants were never watered heavily, as a certain fungus would attack them, causing stem rot and fruit decay. (This we observed in our own irrigated plantings of Pima pumpkins in the Río Grande Valley at Albuquerque.) Care also had to be taken with young pumpkins. When fruit was about the size of a baseball each one was raised off the ground and supported by a piece of brush, stones etc., before irrigating, to prevent rotting from too much moisture. Although teparies were quite hardy and gave a good yield with two floodings, three or four produced a better yield with earlier maturity, and while quite drought resistant they would tolerate considerable moisture. Pink beans had a higher water requirement than teparies but would not withstand frequent floodings. They did not do well if water covered the plants and left a mud deposit on the leaves. Teparies tolerated more drought than maize, kidney beans or lentils, and maize required less moisture than pumpkins, more than water- Pi 312

5: Castetter & Bell N-5 (1938-1940 1942
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Pi Pa 312 melons. Informants were aware that, although chili requires
considerable moisture, it usually dies when planted on flat
irrigated ground, hence it was sowed on the sides of raised
field borders in hills about eight inches apart. Pima and
Pi Pa 312 Papago grew chick peas as a winter crop, planting from
November 1 to early December. Papago awaited the winter
rains before sowing, while the Pima heavily irrigated the soil
before planting and gave the plants comparatively little water
afterwards. In no case were they irrigated after blooming
began. Garden peas needed frequent watering and could be
grown only where there was a permanent source. Wheat was
usually irrigated about four times.

Neither Pima nor Papago carried water to plants (other than gourds, which were sometimes watered by hand) to tide over periods of drought, although informants had heard that the Maricopa did so.

Neither tribe had any ritual for irrigation. One Papago informant said getting water on the fields was not a matter of ceremony but of brain work.

SOIL FERTILITY AND CROP ROTATION

Pi Pa 242 Fertilization of the soil was not practiced aboriginally by either Pima or Papago, yet soil depletion to the extent of necessitating abandonment of fields was extremely rare. Pima land was continually replenished with mineral and organic materials deposited by the river in times of overflow; similarly, Papago fields were naturally fertilized by flash floods. The fact that many of the Piman fields have been under cultivation for hundreds of years, producing sustained crop yields without the addition of manures or other fertilizers, is evidence that considerable plant nutrients were carried by the waters used for irrigation in the Gila Basin. Allowing fields to lie fallow in order to build them up was unknown, although it was recognized that new ground produced larger yields than the old.

5: Castetter & Bell N-5 (1938~~-1940)~~ 1942
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Neither did these people anciently rotate crops to conserve soil fertility. Today, however, it is known that crops such as small grains and sorghums soon deplete the land and result in reduced yields if grown on the same soil repeatedly, so for a number of decades the Pimans have planted crops of maize, beans, pumpkins, melons etc. on ground from which the wheat was harvested in May or June. Pi Pa 242

CULTIVATION

Four being the Piman ritual number, it was supposed to take maize four days to germinate and all informants insisted maize, teparies, pumpkins, watermelons and black-eyed beans were up in four days, that pink beans and lentils required five to six, wheat ten days. If the surface of the ground caked, seedlings other than maize with its pointed shoot had some difficulty in breaking through, and in such cases they were usually assisted by removing or pulverizing the clumps of soil around them. One Papago informant said that in farming *everything had to be taken care of,* even to the extent of aiding plants to break through the ground if necessary. Another stated it was not the purpose of the Papago to let plants grow by themselves but that all cultivated plants have to be taken care of and be helped by human hands, and one can not take things for granted. Informants advised that there was no ritual for cultivation since there was nothing could be done in a field to secure good crops except cultivate, and that if this were not done, poor crops would result. Another perspective on Papago industry and outlook was given by Chico Bailey, who, upon being asked whether the Papago ever abandoned fields because of erosion, said the proper thing for the farmer in a dry-farming area to do is stay on his land, work it and not abandon it; that there was nothing to be gained by moving elsewhere. Pi Pa 241 824

The soil was worked customarily at planting time and again when crops were cultivated, also a third time if condi- Pi Pa 241

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tions necessitated. A few late weeds in a crop, especially in a field of maize, were not considered injurious. All informants were very definite in their opinion that anciently weeds were much less abundant than at present; that the Pimans kept their fields more free of them then than now. This may well be true when we take into consideration the numerous weeds which have been introduced and the rank growths of Bermuda and Johnson grass in the Gila Valley.

The Piman conception of the necessity for cultivation was primarily to remove weeds which competed with the crops. Time for the first cultivation was closely related to the frequency of rains and irrigation, as these aided the growth of weeds. In some cases it might have to be done soon after the plants were up; in others, when rains were delayed, the growth of weeds was retarded, hence there was little need for it. In general, however, maize was fifteen to eighteen inches high when first cultivated. The second, and last, took place when plants were about four feet high—when the ears began to show well. Pumpkins were first cultivated when plants were about a foot high and again after they began to spread out, but this was discontinued after the vines had begun to run well. Teparies were usually about six inches tall at the first cultivation, and were beginning to vine out at the second. Wheat was cultivated only once since it attained much of its growth during the cool months when weeds did not thrive so well; this consisted of working the soil between hills and rows and pulling out the large weeds, both being done when the wheat was about six inches high. Chili was cultivated twice, first when about six inches high, then again when about a foot tall.

Cultivation or hoeing was always done anciently with the weeding hoe. The operator held the implement by both hands in a more or less horizontal position. A right-handed man held the left palm against the lower side of the handle, his fingers clasping the upper side; the right hand was clasped, palm downward, over the blade about a foot from its

5: Castetter & Bell N-5 (1938-1940) 1942
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terminus. He crawled about on his knees, striking with quick, somewhat diagonal thrusts of the weeder made toward himself from left to right, thus loosening and turning up the weeds. The hills themselves were rather free of weeds since that soil had been worked at planting time. The same type of movements were made in loosening the soil, and all aboriginal crops were cultivated in this manner. These Indians liked to do their hoeing before the weeds reached a height of about six inches. The larger ones were pulled by hand or roots cut with the weeder below ground level to prevent the plants from sprouting again; the smaller ones were simply cut down in stride while working the ground. All soil between the hills was loosened or scratched to a depth of approximately one inch, even though it had no weeds at the time and regardless of the kind of crop (except wheat). This was done chiefly to discourage the subsequent growth of weeds, but as well to preserve moisture and keep the ground from cracking. Weeds were always allowed to remain on the ground. Informants said teparies would climb if they had support, and unless weeds were kept out there would be no crop. In hilling, the operator worked in a standing position, pushing the soil around each plant to a height of about eight inches for maize, a little less for teparies, kidney beans and pumpkins; the diameter of each worked hill was approximately twelve inches. Hilling was done during the first hoeing and did not constitute a separate job. However, when dirt in the hills began to dry after flooding and packed somewhat, it was customary to loosen the soil in each hill although the intervening ground was not hoed at this time. Informants said the reason for hilling was to keep soil from cracking, also it prevented dirt from drying out around the roots so quickly and aided in producing larger and better plants and crops. Maize was hilled higher than other crops to anchor it against wind and flood waters.

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Like planting, cultivating was acknowledged as men's work although women might assist if they cared to; practi-

5: Castetter & Bell N-5 (1938-1940 1942

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Pi Pa 241 cally, it was a family enterprise and all able members of the family worked more or less together. A few families worked reciprocally in cultivating.

Thinning out of crops was never done; in fact, it was not necessary since the planter was always careful not to put more seeds in a hill than the number of plants desired, the ideal number per hill being three to five. It was well known that if plants were too thick in the hill they did not do well because of competition for food, water and space, and that corn, for example, under such conditions produced thin stalks with poor ears or none at all. Ends of pumpkin and melon vines were sometimes broken off to increase the production of fruits, but this was probably not an aboriginal practice.

Ceremonial copulation in the fields to increase their productivity was unknown.

CONTROL OF CROP PESTS

Pi Pa 242 Young plants were not protected from animals and wind by branches from shrubs or trees as was done by some tribes. Pieces of cloth were sometimes placed on sticks and set up in the fields to scare birds away, and crude scarecrows were also made, although it is doubtful that this practice was aboriginal.

Anciently, as now, the Pimans were bothered by various pests. Grasshoppers at times caused considerable damage and one Papago informant had distinct remembrance of two different occasions when the grasshoppers completely destroyed his grandfather's tepary crop. Little was done by way of control other than an attempt to drive them out of the fields with weeds of various kinds attached to arrowweed branches and set afire, thus making considerable smoke. After the Pima began to grow wheat, the stubble was sometimes burned in an attempt to rid the fields of pests. Locusts were reported in 1897[65] as having eaten almost all the crops that had been

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[65] *Report of the Commissioner of Indian Affairs* for 1897, p. 110.

5: Castetter & Bell N-5 (1938-1940) 1942

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planted at San Xavier. Squash bugs were fairly common but the only attempt at control was sprinkling ashes on the vines, probably not an aboriginal practice. Cut worms gave little trouble, so nothing was done about them. Rabbits usually came at night and caused some damage; at times the Pima attempted to drive them out of the fields with arrowweed firebrands, but with indifferent success. Papago usually planted their chick peas and lentils in the middle of a wheat field to protect them against rabbits, otherwise these were damaged considerably. When corn began to come up, birds, especially blackbirds and doves, ate the young seedlings, so boys and girls were sent into the fields to drive them away, usually in the morning and evening. There was no watcher's stage. Children protected plants particularly when they were coming up and again when the crop was ripening. On the Gila, quail have caused considerable damage to pink beans by eating the blossoms, although the desert Papago were little bothered in this respect. Various birds ate the young pods of cowpeas. After the coming of the Spaniards, an interesting method of controlling birds that were especially annoying in digging out planted corn grains or seedlings was to tie one end of a horse hair to an earthworm, the other to a stick. When the bird swallowed the worm it found itself unable to escape, was captured and killed.

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Pima and Papago native maize was, and still is, little troubled with corn smut. Rust on wheat and barley sometimes was observed; Pima informants knew it was not spread as the result of irrigation, but often became worse in rainy, cloudy periods. There was little remedy for this except to pull up badly infected plants or burn the stubble to prevent spreading. Rusty wheat was cleaned of much of its rust just before using by washing in watertight baskets. The grain was placed in the basket with water and rubbed by hand, the water being changed when dirty. This was woman's work. Aphis was an annoying pest on watermelons and muskmelons. Ants, too, did considerable damage to young wheat plants, particularly

5: Castetter & Bell N-5 (1938-1940 1942

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after irrigation. Gophers were said to like watermelon roots better than any other food. They were killed with bow and arrow.

Within recent times Johnson grass and Bermuda grass have become established in Pima fields and in those of the Papago at San Xavier, and have constituted a definite annoyance in cultivation.

Chili, which was rather immune to pests, was damaged chiefly by excess moisture which promoted fungal attack of the roots and bases of stems, and by the excessive heat of summer causing blossoms to drop off.

The various fungi attacking crops were regarded as natural agencies. Among neither people was there any ritual or ceremony for cultivation or ridding fields of pests.

5: Castetter & Bell N-5 (1938-1940) 1942
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CHAPTER VIII

HARVEST, STORAGE AND SEED SELECTION

TIME OF HARVEST

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The time to harvest a crop was never determined by the position of the sun, moon or constellations, but by the condition of the crop itself. In other words, each family harvested its crop when ripe, and there was no set common harvest date as among the Pueblos.

Anciently the Pima had two general planting seasons (see section on *Time and Number of Plantings* in Chapter VII). The first sowing, from late March to mid-April, was harvested in late June, just before the sahuaro harvest; the second, made in July immediately after sahuaro harvest, was ripe in October. This is confirmed by Russell's[1] observation. In this connection Emory,[2] writing under date of November 11, 1846, asserts that all Pima crops had already been gathered.

The Papago made a single planting, after the rains began, which was usually in July, although at times delayed until August, and these crops were ready for harvest in October or early November. Among both peoples, introduced wheat and barley were planted from November to February and harvested in May or early June, while the commercial growing of cotton and other crops has resulted in extending the Pima harvest season until mid-November or even later.

There was no established or fixed sequence in harvesting the several crops. Usually, maize, being the major crop, was harvested first, followed by teparies then pumpkins, since a little frost was not considered harmful to them. Teparies could not remain in the field too long, due to the danger of

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[1] Russell, *Pima*, p. 90.

[2] Emory, *Notes*, p. 83.

5: Castetter & Bell N-5 (1938-1940 1942
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241 injury from rain. Cotton and gourds were usually gathered after all other crops had been taken in, although if corn were late in ripening it might be harvested last.

Division of Labor

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462 Planting, cultivating and irrigating Piman crops were regarded as men's work, in which women played a minor role. Quite the reverse was true with harvest, for it was regarded as essentially women's responsibility and men did only the heaviest of the labor, but both might work together in the field. However, with the introduction of wheat culture, some modification occurred, for the harvesting of wheat fell largely to the men, although assisted by women. Harvesting anciently was often done reciprocally, several families within a geographic area helping each other. To invite relatives to assist with harvest was regarded as favoring them. For their labor they were asked to help themselves to a share of the produce, but what they took was governed by what they considered they could repay in turn. When widows assisted, they were given a portion of the crop in payment.

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Maize

Gathering, Roasting, Drying and Storing

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241 The Papago planted a single crop of maize, which they harvested in October; the Pima grew two crops, the first maturing in late June, the second in October. In no case was there any difference in the types of corn grown at the two plantings, nor was there any difference in the purpose for which the two crops were used.

Corn was considered mature and ready to harvest when most of the stalks and husks were thoroughly dry. It was then time to begin even though some ears were still green. The variety of native corn that had been planted first would be ready to harvest first, regardless of color, for no one variety ripened more quickly than any other.

5: Castetter & Bell N-5 (1938-1940) 1942
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Anciently the Piman method of harvesting maize was to pull up the entire plant, or, in some cases, break it off at the ground, and throw it in piles, care being taken to keep separate the several colors of corn, since they had been planted in different plots; this was man's work. One reason for pulling up and removing the stalks was to have the field cleared for the next season. After Spanish contact, plants were sometimes cut off at the ground with an iron implement. Another historic development associated with turning stock into the field to eat the stalks was to husk the corn directly off the standing plant, the stalk being allowed to remain. The individual first ran a sharpened, hard stick of creosote bush or mesquite through the husk, then broke the ear out and threw it on a pile. In any event, harvesting was begun at a convenient place in the field, and did not proceed by designated direction as among some of the Pueblos. There was no ceremonial restriction against burning the husks, cobs or stalks. Cobs were used as fuel, particularly in cooking, and some stalks might be used in building the walls of a new structure. Saving purple husks to be used as a source of dye was unknown.

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The plants were piled in one or more heaps, depending upon the size of the field, and women and older children usually gathered around the piles to remove unhusked ears from the stalks and throw them in piles. These ears were then carried to the dwelling in burden baskets (figured by Densmore[3]) by the women.

Although the Pimans husked some of their maize, particularly in selecting ears for seed, it was the common practice to partially roast their corn in unhusked ears by placing it in piles and covering with brush; this was set afire, green mesquite branches being used to stir and turn the ears, and, after several minutes of roasting, to throw them out on a bed of grass. During the roasting process much of the husk was burned away. These ears were dried on top of the house for

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[3] Densmore, *Papago Music*, pl. 10.

5: Castetter & Bell N-5 (1938-1940 1942
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about ten days. Should rain come while the corn was drying, no special effort was made to protect it, as it was considered the corn would soon dry out uninjured, particularly if the ears were rearranged. One informant said the best way to determine whether corn was dry enough to be stored without molding was to test a few kernels by crushing with the teeth. Another said his method was to take a small handful of grains and shake them, the sound being an indicator of their dryness. Many of the Pima and Papago continue the roasting practice, and it is still not uncommon to find among both peoples storehouses in which partially roasted maize has been stored away unhusked. In some cases the process differed to the extent that the fire was made in an open pit and, when it had burned down, the ears were thrown on the embers to roast. It was considered that such partial roasting improved the keeping qualities and facilitated the grinding of corn.

A less frequent procedure, practiced mainly by the Papago, was to husk some of the ears and remove the grains, then parch and dry them on a sotol mat on the roof.

Shelling

Pima and Papago corn was regularly shelled before storing. After thoroughly drying, the unhusked, partially roasted corn might be shelled in any of three ways. The first, used with small quantities, was to remove a few grains at one end of the ear, then knock off the rest with the butt end of a cob. The second was to remove one or two rows of kernels the length of the ear with the aid of a stone scraper or a sharpened piece of creosote bush wood, then finish by twisting the ear with the hands. Finally, and most common, if one had a considerable amount of corn to be shelled it was placed on a sotol mat or cotton cloth and beaten with a club, then grains remaining on the ears were removed by hand. Unlike some of the Pueblos, there was no difference in the way seed and food corn were shelled. This was woman's acknowledged

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This was women's acknowledged work in which the man seldom participated, and after corn [462] was shelled it was woman's work alone to care for it. At present many of the Pima and Papago have mechanical shellers. 251 252 Shelled corn was placed on a mat or cloth and again allowed to dry for two to three days. Grains were then winnowed in a large basket by tossing into the air to remove chaff. Or this might be done by tilting the basket about four feet above ground and allowing the kernels to fall gradually on a sotol mat or cotton cloth. Corn was always shelled before being stored, then was ground into meal as needed.

Storing Food Corn

Crops were never hidden by the Pima for protection from Pi enemies. These Indians usually stored their corn, after shelling, Pa in large cylindrical nest-like bins, or granaries, made of 251 crudely coiled, thick bunches of arrowweed, which were very 415 286 durable and lasted for years. They needed no base, since the roof or platform upon which they rested served this purpose, although a layer of arrowweed was spread on the spot where they were to stand. Over this granary was a low, cone-shaped roof of arrowweed extending beyond the rim, and covered with dirt. A cotton cloth was sometimes placed beneath the roof and over the contents of each bin. Varying considerably in size, the average bin was about eighteen inches tall by three feet in diameter. Their manufacture has been described in detail and figured by Kissell.[4]

These Pima granaries were usually placed on the roof, less commonly in groups on a platform of logs to keep them above the ground. Small sticks were placed across these logs and covered with arrowweed branches, which also served as a base for the bottomless bins. In post-Spanish times, groups of such granaries on a platform were enclosed by a low fence for protection against stock. In this connection, the reader is referred to Emory, Russell, Clark and Kissell.[5]

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[4] Kissell, *Basketry of the Papago and Pima*, pp. 173-90.

[5] Russell, *op. cit.*, fig. 4; Clark, *Lessons from Southwestern Indian Agriculture*, fig. 12; Kissell, *op. cit.*, figs. 29, 30; Emory, *op. cit.*, p. 85.

5: Castetter & Bell N-5 (1938-1940 1942

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Pa 251 415 285 Pima nest-shaped granaries were not used by the Papago. The very few storage baskets made by them were shaped like a hive, or a barrel, with incurving top, therefore of smaller diameter at the neck, and were about four feet in diameter and three high. The sides were usually crude coiling of twisted grass sewed together with mesquite bark, since arrowweed is rarely to be found in their territory. These granaries usually were not placed on tops of buildings, but outdoors on stones or boards. Since, unlike the Pima granary, they had no roof, the opening was covered with an old flat basket or a broken olla. Being constantly exposed to the weather, Papago storage bins lasted only about two years.

However, Papago preferred to hide their food, and the usual expedient was to use jars rather than baskets. The most common jar was an old olla which had lost its porosity and no longer kept water cool. But special jars for storage purposes were made, as well as traded. The lid consisted of a piece of broken olla weighted with dirt or a stone.

Formerly the Papago also made temporary enclosures of sotol mats to store their grain.

A patriarchal Papago family stored its crops in several different places. A large supply was kept in the storehouse close to the village, while a few granary baskets might rest on stones near the dwelling, or, rarely, on the roof. A supplementary storage place was located in the flats not far from the base of the mountains, within easy reach of the winter camp. This was often a pit, deep enough to hold jars and
Pa baskets, and covered with brush or dirt. Here the baskets
[324] were protected with branches of the very spiny cholla, *Opuntia Bigelovii*. During their winter travels, the family sent a man back to the storehouse now and then to get food, but they tried to leave the supply at the village untouched until spring, the period of food scarcity, and it was not drawn upon until absolutely necessary.

Pi Pa 251 415 285 A second type of Pima storage container was of coarse coil, used to store maize, beans, wheat, wild seeds etc., and

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was more carefully constructed than the arrowweed bin. The Pi Pa 251 largest of these were globular in form among both peoples and might be as much as six feet tall and almost as wide. The 415 285 smaller ones were rather bell-shaped among the Pima, and more or less barrel-shaped with the Papago. They were covered with a lid (usually the bottom of an old basket) and sealed with mud.[6]

After the introduction of wheat, the Pima made such baskets of a foundation of wheat straw bound together with Pi Pa [illegible] strips of willow bark *(Salix nigra)*, mesquite or catclaw *(Acacia Greggii)*. Papago foundation elements were beargrass (*Nolina*), ocotillo or wheat straw, the binding material of yucca or mesquite bark. This is the type of basket which Bartlett[7] observed among the Pima, and described as large vase-like baskets made of wheat straw ropes as thick as a man's arm, coiled into graceful forms and sewed together. He asserted that these held from ten to fifteen bushels and were filled with wheat and shelled corn. We have been unable to satisfy ourselves that this type of storage basket, figured and described by Russell[8] and Kissell,[9] is aboriginal. These were kept in a small storage house, never on roofs nor outdoors on platforms. This house is comparatively modern and of the same type as that described by Bartlett[10] in 1852. It was eight or nine feet high, rectangular in outline, with walls made of stakes of ocotillo or sahuaro ribs set close together, and provided with a dirt-covered roof. Although customarily left open for free circulation of air, at times they were covered with a layer of mud.

At present neither Pima nor Papago shell their corn to Pi Pa 251 any great extent before storing. Much of it is simply thrown on top of an ocotillo *ramada* and dried without husking, then shelled as needed.

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[6] Kissell, *op. cit.*, pp. 179-85.
[7] Bartlett, *Narrative*, II, 234-36.
[8] Russell, *op. cit.*, pp. 88, 143-48.
[9] Kissell, *loc. cit.*
[10] Bartlett, *loc. cit.*

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It was, of course, impossible to store different colors of corn separately, for cross pollination naturally resulted in considerable mixture. However, this was done to the limits of practicability and ears of similar colors were placed together in separate piles when husking.

Seed Selection

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Informants had little knowledge of the hereditary background of crop plants. Both Pima and Papago thought good crops resulted from good culture and that good qualities did not reside "in the blood." These Indians were not interested in the "sports" for they were regarded as freaks. Selection of seed corn was done by women largely, since they were the ones who did whatever husking was done, although this was not their special prerogative. While husking, good ears were put to one side and saved, or, in some cases, ears for seed were selected out when husked ears were being shelled. In no case were ears selected from the plants while standing in the field. The chief criteria were well-developed, mature, plump, clean, large grains, and little attention was paid to size or shape of the ear, or whether the grains were in regular rows. Ears badly worm-eaten were never selected for seed. All grains on a good seed ear were planted, for it was believed the ones at tip and butt were as good as those in the middle. However, the practice has now been modified in that tip and butt grains are not used for seed. Care was always exercised to keep seed corn pure as to color, so it was always taken from ears of unmixed solid colors.

It was not considered advisable to use corn that was more than two years old for seed, as it would not germinate well. Fresh seed was always planted if possible; however, seed left over in any year might be saved for planting the next.

Storing Seed Corn

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Even with considerable care, rats, mice and weevils sometimes got into maize stored in baskets. Hence, when shelled

5: Castetter & Bell N-5 (1938-1940) 1942
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and dried seed corn was to be stored it was mixed with wood Pi ashes and placed in ollas. Among the Pima, a cotton cloth Pa was then placed over the top of the olla and sealed with mud 251 made of saline soil, while the Papago usually sealed such ollas by applying mud mixed with grass to the improvised lid. All the seed placed in an olla was of a single color and type, and there was never any mixture. Seed corn was eaten only in case of emergency. No seed or food crop was ever stored in hides.

In some cases seed ears were braided together in clusters by means of their husks, hung outdoors until dried, then suspended from the ceiling in the house.

There was no storage ritual for either food or seed corn.

Utilization of Corn

Informants said blue corn was used mostly for parching, Pi white regarded as best for pinole and yellow as most suitable Pa for tortillas, although these categories were not always maintained. 252 The Pimans utilized a good deal of green corn for [262] food, but in no case was a special planting made for this purpose, such ears simply being removed from regular crops. Several informants said it took a little more than "two rounds of the moon" from time of planting to get good roasting ears —about nine to ten weeks. This conforms with our own observation that native Pima and Papago corns produce silks and tassels within fifty to sixty days after planting. One way of determining its suitability for this purpose was by the condition of the silk, selection being made before the silk became entirely dry; another by judging the hardness of grains through the husk. It was eaten in a variety of ways; for example, directly off the ear after roasting unhusked on the embers of a mesquite brush fire, or such roasted corn was dried, then the grains cut from the ear and stored in ollas or shallow baskets; sometimes the grains were scraped from the ear, placed inside several corn husks, wrapped and tied at the ends with shreds of husks, resembling a tamale, and boiled.

5: Castetter & Bell N-5 (1938-1940 1942

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Pi Pa 252 Paper bread was unknown to the Pimans. Corn pollen was never utilized, even ceremonially. One informant said that, as a boy, he used to see people putting ears heavily infested with corn smut on coals to roast, then taking off the smut and eating it without other preparation. The standard Pima meal consisted largely of cornmeal gruel.

PUMPKINS

Time of Harvest

Pi Pa 244 As indicated earlier in this chapter, the Papago made one planting of pumpkins—when the rains began in July, and this was harvested in October; the Pima made two plantings—the first when mesquite began to leaf out in spring, the second immediately after sahuaro harvest in July. The first sowing was harvested in late June, the second in October. All their varieties of pumpkins were sowed at the first planting, only cushaws in the second. Piman pumpkins were usually harvested after maize and teparies had been put away, for many were still unripe at the maize harvest. Color of the fruit indicated whether they were mature enough to be gathered, the cushaw type usually ripening first, the cheese pumpkin last. It was known that light frosts would do them no damage, so it was not necessary to bring them in before that time.

Method of Harvest

Pi Pa [246] Anciently it was woman's work to gather the pumpkins. Varieties were sorted into separate piles in the field to avoid a second handling, then carried to the house in a burden basket. Neither Papago nor Pima left a portion of the vine attached to the fruit, as was done by some tribes, but in severing pumpkins from the vines care was taken not to break the fruit stalk away from the pumpkin itself, otherwise it would rot readily.

Storing

Pi Pa 251 The average family had a crop of sixty to one hundred pumpkins, which were stored immediately after gathering.

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They might be placed in a pile outdoors and covered with Pi
corn stalks, particularly if the crop were large, but more Pa 250
commonly were piled up in the storehouse with or without a covering of corn stalks. They could be kept at least until February, and in some cases as late as April. Cheese pumpkins kept best and longest, while the cushaws were recognized as poor keepers. If a pumpkin was seen to be rotting in storage it was sliced, then dried, in the manner described below for storing dried pumpkins; if disintegrated, it was discarded.

Anciently, each Pima home was provided with a single Pi'
storehouse, generally an oval pit about eight feet long and 251
two feet deep, covered by a gable roof of willow branches 343
thatched with arrowweed. A forked pole of mesquite was set at each end of the oval and a beam placed lengthwise of the pit set in the forks of the poles. Willow branches were stuck into the ground along the brink of the pit and leaned against the beam. This storage house was used for pumpkins and, in historic times, watermelons and the like. It was practically identical with that described in detail by Spier[11] for the Maricopa. The same structure, with modifications, is still to be seen among the Pima. It is a cubical pit about three feet deep and as wide and long as required for the supply, now used exclusively for storing pumpkins. The floor of the pit is a layer of poles or logs covered with corn stalks on which the pumpkins are piled. In each corner is an erect forked pole, with cross beams of sahuaro ribs, and a rough arrowweed or cornstalk roof, and finally the whole covered with dirt.

Utilization of Pumpkins

When frost came, many pumpkins were still unripe and Pi
in various stages of development. These, particularly the Pa
cushaw type, were never discarded, but the skin removed by 252
scraping, the flesh cut into pieces, cooked, usually with mesquite beans, and eaten immediately. At times, small immature pumpkins were gathered during summer and cooked

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[11] Spier, *Yuman Tribes*, pp. 89-90.

5: Castetter & Bell N-5 (1938-1940 1942

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as a green vegetable, either whole or in pieces. Often they were cooked with rabbit meat. Immature pumpkins were also sliced thin and dried, and were said to be like fresh slices when soaked in warm water; these were boiled and eaten. Informants stated the first small green fruit was ready for use within five weeks after planting.

Ripe pumpkins, chiefly cushaws, were stored, then utilized throughout the winter as needed. They were simply cut into two-inch cubes and cooked in an olla, sometimes with mesquite beans, until soft and mushy, or into large pieces and roasted. The cheese pumpkin was regarded as having the best flavor of all Piman varieties, but the cushaw was the only one used to any great extent without drying.

The customary method of drying ripe cheese pumpkins for winter use was to remove the seed through an opening made by cutting out the fruit stalk. After peeling, the pumpkin was allowed to dry for about two days in the sun, then cut into one or more spiral strips about an inch wide, and hung on poles, or laid on top of the house in the sun for about six days. These were twisted into hanks, dried thoroughly and stored in baskets or ollas. When needed they were broken into pieces and boiled, usually with cornmeal.

Soft-shelled pumpkins were best for making strips and drying, and the cheese pumpkin therefore was regarded as most desirable for this purpose. Hard-shelled varieties, chiefly the cushaws, were best for roasting and were the only ones used to any great extent in this way; their only variety of *Cucurbita Pepo* was regarded as good for roasting but not for drying in strips, and for this reason was not more extensively grown. Pumpkins were roasted by burying the halves in the hot ashes of a corncob fire, a whole day being required.

Pima informants said that, at times, the flesh was scooped out of a greenish black variety of cushaw and the hard shell used as a storage container.

Pumpkin flowers also were eaten by both Papago and Pima, but usually only the male flowers since they did not

5: Castetter & Bell N-5 (1938-1940) 1942
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develop into fruits. A quantity was gathered early in the morning and, after removing the calyx, dried in the sun on a mat or cotton cloth for about three days, then stored in a sealed olla. When used they were cooked with mesquite beans. At times, they were mixed with cornmeal and boiled, the mixture spread out on grass or a cloth to dry for about three days, and stored in ollas. This was again boiled when utilized. Twisted flowers, after removal of the green calyx, were also boiled and eaten with pinole.

Pi Pa 252

Papago and Pima regarded pumpkin seeds as a delicacy. These were parched by placing in a piece of olla with live coals, stirring until done, and eaten much as we eat peanuts; or at times these seeds were parched with corn.

Pi Pa [262]

Seed Selection

Pumpkin seed was selected in a general way (by either the man or woman) by simply taking those from the largest pumpkins, size being the most important criterion. Or, if a pumpkin proved to be especially sweet, the seed was saved. This was placed in a small olla with others of the same variety and, when sowing time came, a quantity was taken from the olla and planted without culling out individual seeds.

Pi Pa 242

TEPARIES AND COMMON PINK BEANS

Time of Harvest

The Papago made only one planting of teparies—in July, and harvested in October. The Pima made two; their first planting, as mentioned earlier in this chapter, was made when mesquite began to leaf out, the second soon after sahuaro harvest. The first was mature in late June, the second in October.

Pi Pa 244

Informants said if maize and teparies were planted at the same time the maize would be ready to harvest before the teparies, which required a minimum of ten weeks under favorable moisture conditions. They invariably matured

5: Castetter & Bell N-5 (1938-1940 1942
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Pi Pa 244 less quickly than pink beans. However, they were not allowed to remain long in the field after ripening, due to possible damage by rain.

Method of Harvesting and Storing

Pi Pa 442 The entire process of harvesting teparies and kidney beans, from pulling the vines out of the ground to sealing the seeds in ollas for storage, was regarded as women's work, although men might help if not otherwise engaged.

Brown and white teparies and pink beans were planted in separate plots and harvested separately. The plants were grasped just above the ground line, pulled up, roots and all, and placed in piles. They were then taken to the threshing floor and allowed to dry for from three to six days. The threshing floor was prepared either in the field or near the house by removing weeds from a designated area, then leveling. After it was swept clean it was hardened by tamping with the feet; if dry the soil was first moistened. All tepary vines of one variety, or the pink bean vines, were placed on this threshing ground in a pile and beaten with a pole (five or six feet long and about one and one-half inches thick) so as to knock the ripe pods off the vines. Vines were removed to one side of the floor and allowed to remain for several days to permit drying of pods not fully mature, then beaten a second time.

Pods were placed in small piles on a mat or cloth and beaten with a short stick, about two feet long, to release seeds from the hulls. Many hulls were blown out by the wind, and most of the remaining ones scraped away with the fingers. Final winnowing was done at the threshing floor by allowing the beans to fall gradually from a large shallow basket, held about four feet in the air, to a sotol mat or cotton cloth, most of the chaff meanwhile blowing away with the wind.

Pink beans were harvested in the same manner as teparies. They were said to be ripe when "the moon had gone around twice" after planting. At the home of informant

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Pi Pa 244

Gerónimo we observed his wife threshing pink beans in the field on a floor thirty-five feet in diameter. This floor was hard and somewhat depressed because of continued use over a period of years, and there was a pole in the middle to which horses were tied at the time of wheat threshing. Several piles of pink bean, as well as of tepary, vines were on the floor. She sat in front of one of the piles of pink bean vines and flailed it heartily with a stick about five feet long and one and one-half inches thick. After beating for a time she removed some of the vines, then beat again, and finally removed all vines from the pile to the edge of the floor. These vines, even after heavy beating, retained some immature pods, and were dried further before receiving a final threshing. Before she had finished her work for the day it began to rain, so the beans and pods were carried in flat baskets and cotton cloths into the house, the vines being left on the threshing floor.

Pi Pa 251

Both winnowed teparies and pink beans were laid in the sun on a mat or cotton cloth for several days to dry fully, after which, among the Pima, they were stored in close-coiled baskets in the manner described for corn, or in ollas sealed with saline soil. All beans, regardless of kind, were sealed to protect them from mice, etc. Among the Papago, such baskets or ollas were covered with an old flat basket, or a piece of broken olla shaped to conform roughly to the opening, and sealed over with mud mixed with crushed mescal stalks or grass. Both peoples segregated, and stored in separate baskets or ollas, the different colors of tepary (usually only white and brown were grown), as well as common pink beans.

Yield

Pi Pa 244

Teparies are very drought resistant, although they respond well to additional moisture. In periods of drought they often produce a good crop while common pink beans, or *frijoles,* under the same conditions, are a total failure. Teparies are also much more resistant to insect attacks than are pink beans. That they bear a considerably larger number

5: Castetter & Bell N-5 (1938-1940 1942
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Pi Pa 244 of pods than do *frijoles* is reported by Freeman,[12] whose experiments showed teparies yielded 450 to 700 pounds per acre by dry farming, compared with 800 to 1500 pounds when grown under irrigation; also that under all conditions teparies outyielded *frijoles* often as much as four to one. There was no difference in the yield of different kinds of teparies.

Utilization

Pi Pa 252 [262] Dry teparies were customarily cooked by themselves and eaten, or cooked with roasted corn. Pink beans were not considered good unless cooked with meat, preferably fat, and, since this was not always available, their use was somewhat limited. Formerly, in times of food scarcity, women would go out into the field prior to the general harvest and gather such teparies as had already matured, but these were never cooked as green beans (i.e., both pods and seeds). *Frijoles* were usually gathered only when ripe, then dried and stored, but on occasions of need were picked in the pod before ripe, and boiled.

Pi Pa [262] All Pimans seem to prefer the taste and quality of the white tepary to that of the brown. However, there is a great deal of variability among individuals as regards preference between teparies and pink beans. There is little difference in the nutritive value of the two, although the tepary markedly surpasses the latter in rate and degree of swelling and of absorptive power when soaked in water; also the seed coat of the pink bean is heavier than that of the tepary.

Anciently there was little use for tepary and pink bean vines, although if building a house a person might place some on the roof and cover with dirt. Hulls were never utilized. At present the vines and hulls serve as fodder for cattle and horses.

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[12] Freeman, *Southwestern Beans and Teparies.*

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Seed Selection

There was no seed selection of teparies or pink beans. Seed to be planted was simply taken out of the general stored supply at planting time. Pi Pa 242

COWPEAS (BLACK-EYED BEANS) AND LIMA BEANS

With the coming of the Spaniards, cowpeas, which, despite their name, are more closely related to the beans than peas, were introduced among the Pimans. Planted by the Papago in July, and by the Pima in late March or early April and in some cases again after sahuaro harvest in July, the pods were harvested progressively as they ripened, since plants would grow indefinitely as long as weather conditions permitted, although quite susceptible to frost. Informants said one could begin picking the long pods about eight weeks after planting, those near the base ripening first. At the time of general harvest, the pods remaining on vines were still somewhat green, so the vines were piled and allowed to dry for a week or more before being threshed. Threshing was done by beating with a stick or, if the quantity were small, by hand. Pi Pa 244

Like black-eyed beans, the single sowing of lima beans (made by the Pima in late March or early April and by the Papago in July) was harvested progressively throughout the growing season as the pods ripened, and the growth of plants was terminated only by frost or lack of moisture. Among the Pima, whenever plants began to fall off in production of pods they were irrigated, whereupon a new crop began to set. The first pods were ready to pick when mesquite beans were fully ripe. Although limas stand drought well, their yield is closely associated with the amount of water they receive, hence, at present they are more extensively grown in the Pima than in the Papago country. Usually women picked the pods and shelled them by hand. However, when families grew a considerable quantity they were placed on the ground on a large cotton cloth and trampled out by foot. The

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empty pods were then removed by hand and seeds winnowed to remove chaff. The Pima now plant limas in June or July and they yield better if not irrigated too heavily.

Limas and black-eyed beans were usually planted in smaller amounts than teparies and pink beans, hence the quantity of seeds secured at any one picking was small.

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As with teparies and pink beans, the harvesting of limas and black-eyed beans was accepted as woman's work.

Seed Selection

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There was practically no selection of seed for limas or cowpeas, and seed to be planted was simply taken out of the general supply with no discrimination other than discarding shriveled ones. Informants said one never got poor seed of these crops unless it was immature as the result of injury by early frost. The only precaution was to use fresh seed, for it was known that these beans lost viability rather quickly.

CHICK PEAS AND LENTILS

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Both chick peas and lentils were recognized by the Pimans as introduced crops. Pima and Papago grew chick peas, or *garbanzos,* to only a small extent, and lentils even less, although both were regarded as very nutritious. The chick pea is well adapted to arid and semi-arid regions and matures in about ninety days. Both Pima and Papago made a single planting, sowing them as a winter crop from November first to February and harvesting in April or May, consequently they required little moisture. It has been reported that *garbanzos* will endure a temperature of 13° F. without being injured. People began to harvest chick peas when mesquite beans were about ripe, and picked them progressively. The first pods to ripen were simply rubbed by hand. When the plants began to dry up, tops were cut off with a sickle or pulled up, piled and dried for a few days, then threshed by beating with a stick or trampling. They were then winnowed, dried further and stored in a sealed large gourd or olla. On

5: Castetter & Bell N-5 (1938-1940) 1942
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good soil a yield of one thousand pounds of chick peas per acre was not unusual. Pi Pa 244

Pima and Papago planted lentils as early as February, and they were ready to harvest in April or early May. Pima frequently made two plantings of lentils, the Papago but one; this second sowing was after sahuaro harvest. Like chick peas, they were fairly drought resistant. Lentils were harvested and stored in the same manner as teparies, and were reported as returning a yield of tenfold.

COTTON

Time of Harvest

Both Pima and Papago anciently made a single planting of cotton. Among the Pima this was done from late March to mid-April; the Papago planting was made as soon as the summer rains began, usually in July but at times later. Cotton took at least eleven weeks to mature but need not be picked until all other crops were out of the way, usually in late October or early November. Pi Pa 248

Method of Harvest and Storage

Anciently it was customary for the Pimans to gather their cotton and pile it in the boll on tops of houses, sheds or *ramadas* for drying. In this connection Emory[18] wrote, under date of November 11, 1846, that "The cotton has been picked, and stacked for drying on the tops of sheds." More recently, in harvesting Pima cotton, two ends of a cotton cloth have been tied over the shoulder, the cloth thus hanging at one side of the body constituting a sort of sack, and in this the bolls were placed as they were picked. They were then taken to the house and spread out on a cloth on the floor in one corner of a room. Only if the season were getting late and frost might kill plants were the stalks removed before bolls matured. Stalks were broken or cut off at ground level then placed on top of the house or a shed and the bolls allowed to

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[18] Emory, *Notes*, p. 83.

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248 ripen before being picked. Of course, at present, with the commercial growing of cotton, Pima pick the cotton from the open bolls directly off the plants in the field.

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[242] Cotton seed was stored in sealed ollas in exactly the same manner as were teparies. There was no selection; seed for planting was simply taken from the general supply stored for food.

Utilization of Cotton

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372 Cotton was grown for both lint and seeds. The lint was used for cordage, cloth, garments and tinder. Tinder was prepared from a cotton rope about one-half inch thick, several inches long and frayed at one end, used especially for lighting cigarettes. Sparks made by pounding two pieces of flint together ignited the fiber. Its use as tinder may be a Spanish introduction.

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252 Cotton seed was parched and eaten much like we use pop corn. The seeds were placed in an olla with embers of mesquite wood on top. The olla was continually shaken and the live coals soon parched the seed. Another way of utilizing the seed was in combination with mesquite or cornmeal. Mesquite pods were pounded fine with a wooden mortar and pestle, seeds removed, and the flour mixed with that secured by pounding parched cotton seeds in a mortar. The two were then mixed and molded into a sort of cake-like tortilla, baked in ashes and eaten. A combination of cotton meal and cornmeal was utilized in the same way. Informants said either mixture tasted like, and had the texture of, tallow. From the pounded seeds Papago and Pima made a kind of bread which was baked in hot ashes. At times, water was added to pounded cottonseed meal, strained, and the liquid used as seasoning in cooking. The strained meal residue was sucked in order to remove the nutriment, and the pulp discarded.

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776 Papago informants stated cotton was used ceremonially on their prayer sticks to symbolize clouds, and thereby invite rain. Pimas preferred eagle down for this purpose.

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Ginning, Plucking, Spinning and Weaving

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It was woman's work to gather cotton, but weaving was an old man's art although women might help at times. Weaving of cotton was a practice common to both Pima and Papago.

One method of ginning cotton was to turn upside down a thick pottery vessel about fifteen inches in diameter made specifically for the purpose. A mat of cotton bolls was stretched over the bottom of the vessel and a smooth arrowweed stick (about eighteen inches long and three-fourths of an inch wide), from which the bark had been peeled, was rolled over the cotton, working the seeds out of the lint and toward the edge of the mat, where they dropped over the side of the bowl. This was continued until all seeds were removed.

After ginning, the cotton was spread on a cleaned smooth spot on the ground and plucked with the plucking bow in the same manner as that described by Spier[14] for the Maricopa. This was a scraped stick of arrowweed two to three inches long, strung taut to form a small bow. The bowstring was held close to a mat of cotton and plucked, the string thereby catching up the cotton fibers which were wrapped into a tight roll around the string due to its vibration. When pulled off the string, it was rolled into a loose yarn on the thigh, and was then ready for spinning. One Pima informant insisted that ginning was also done with the plucking bow, the fiber gradually being plucked away, leaving the seeds. In all probability the plucking bow was not aboriginal among these Indians.

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Spinning was done by women on a simple spindle, and this process was described by Emory[15] in 1846. Although weaving was not highly developed among the Pimans, it was done on a loom, by old men, in a manner described for the Pima in 1852 by Bartlett. Such a loom, as well as a spindle, is figured and described by Russell.[16]

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[14] Spier, *Yuman Tribes*, p. 113.

[15] Emory, *op. cit.*, p. 85.

[16] Bartlett, *Narrative*, II, 255; Russell, *Pima*, p. 148-51.

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Dyeing

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Cotton was dyed buff by dipping in a dark buff ocher high in ferric oxide, but this was used only for the selvage thread. Cotton fiber dipped into a decoction made from the roots of curly dock *(Rumex crispus)*, an introduced species, as well as other species of this genus, took on a yellow color, and these roots were said to yield a darker color when the plant was in flower. Informants said roots of the native *cañaigre (Rumex hymenosepalus)*, from which all dirt had been removed, were crushed, then boiled to yield a yellowish dye solution for cotton. Fresh mesquite gum was boiled with this dye to make it fast.

GOURDS

Time and Method of Harvest and Storage

Pi Pa [462] 249

Pima and Papago made a single planting of gourds. Ordinarily it was man's task to plant, but woman's to cultivate, carry water for them if necessary and harvest gourds when ripe, although men might assist in any of these stages. This single planting was made by both peoples—by the Pima in late March or early April, the Papago in July. A little more than three months was required for them to ripen.

Gourds were all gathered at once rather than progressively, and this while the plants were still green. Women gathered and carried them to the dwelling in a burden basket or cloth, cutting each one off the vine with a sharp stone. Care had to be exercised in handling them until dried lest they become bruised. When harvested, they were laid away to dry throughly before being prepared for use, usually being placed in a pile and covered with weeds or grass. They were selected by shape according to the purpose for which they were to be utilized.

There was no selection of seed from specific shapes of gourd to propagate particular types, although formerly it was customary to bind a piece of bark or cloth around them while growing in order to secure certain shapes.

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Preparation for Use as Vessels and Rattles

Gourds were prepared for use as follows: First they were Pi
dried thoroughly, otherwise decay would occur in the process Pa
of preparation. The bitterness was drawn out by filling with 415
water through an opening cut at the stem end, then allowing it to stand for three days so that the fleshy interior might decay. Most of the pulp was removed by working with a stick, then the gourd refilled and again allowed to stand for three days, after which as much of the remaining pulp as possible was scraped out. This process was repeated as often as necessary, or until the vessel ceased to impart any taste of bitterness to the water allowed to stand in it. Finally, the vessel was thoroughly rinsed with water several times and was ready for use.

Sometimes gourds which had been prepared as above were baked in live embers for two or three days to harden the shell, as this made them more durable when used as containers. It also gave them a glossy appearance since the outer surface peeled off.

Gourds or their seeds were never eaten. They were used Pi
for canteens, dippers, containers, storage vessels, ceremonial Pa 415
rattles and masks. For storing seeds, the hole made at the end 534
of the neck was plugged with a stick. To prepare a gourd for use as a rattle the end of the neck was cut off, then cleaned as described above, and the gourd partly filled with pebbles taken from an ant hill. A wooden handle was fitted into the opening and secured with the gummy secretion of creosote bush or arrowweed. Gourds to be used as dippers or dishes were cut lengthwise by making a continuous row of holes with an awl the whole length of the fruit, then snapping it in two.

DEVIL'S CLAW

A single sowing of Devil's claw, or unicorn plant *(Martynia* Pi Pa
louisiana), was made by both Papago and Pima, after sahuaro 249
harvest, and the pods gathered before frost. This was woman's [462]

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Pi Pa [462] work, as was the cultivation and harvesting. Plants were
249 quite drought resistant.

Only the white-seeded form was grown, as its pods had longer, finer-grained and deeper black strips of epidermal tissue, and therefore more suitable for use in basketry. They were planted in hills about six feet apart with four or five seeds to the hill, in holes about six inches deep, although the seeds were covered to a depth of only two inches.

Pods were gathered as they matured, about the time maize was ripening, but all must be gathered before frost to prevent the black color of the pod from fading. Fruits were ready to harvest when the dry epidermis peeled off readily. The ripe pods were gathered and laid out in piles in the field to dry, and informants said they had seen their mothers spread wood ashes over such piles. When thoroughly dry the pods were hooked together to form large clumps or balls, and stored in a rain-proof building, since weathering affected their color.

Before removing the strips of epidermis for use in basketry, the pods were buried in moistened ground over night to facilitate the stripping. However, more recently some merely plunge the pods in boiling water to aid in removing
Pi this tissue. These strips were tied in bundles and stored in
Pa [285] baskets or ollas. The process of preparing and utilizing *Martynia* in basketry has been discussed in detail by Kissell.[17]

Pi Seeds of the unicorn plant were sometimes eaten but
Pa were of little importance as food. They were removed from
[262] the pods at the time the strands of epidermis were stripped, and were dried and stored in a small sealed olla.

WHEAT

Time of Harvest

Pi Pima and Papago planted wheat any time from November
Pa to February, and harvested in May or early June. However,
243 late sowings usually produced small plants and a poor yield.

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[17] Kissell, *Basketry of the Papago and Pima*, p. 202.

Informants said the best crop was obtained when planted Pi
about the first of January, as there was then little danger from Pa
frost injury when plants were coming into head in April. 243
However, at the Sacaton Experiment Station, November plantings of the principal varieties of wheat for twenty-two years usually have given higher yields than later plantings, and in only two seasons did they suffer any freezing damage after heading. At present it is customary for the Pima to Pi
turn cattle into the fields to pasture on the green wheat [231]
plants, then irrigate in January, after which the wheat tillers well (puts forth new shoots around the base of the original stalk) and is ready to harvest about the last week in May. Barley can be pastured three or four times and still give a crop, wheat only once, so it is considered superior to wheat for this purpose. Both are first pastured when about a foot high. Pima like to plant their barley in late October and harvest in late May, as there is little danger of frost damage to this crop.

As indicated in an earlier chapter, until recent years large numbers of Papago visited the Gila Pima to take part in the wheat harvest, and the Pima paid them for their labor in wheat. Informants reported that some Pimas became so dependent on the Papago harvest help that the wheat crop would shatter from overripeness if their special Papago families were late in arriving or failed to come at all.

Method of Harvest Pi
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Harvesting wheat was usually done by both men and [462]
women working together, and reciprocal help at wheat harvest was formerly quite common. If a relative or friend assisted in planting he was given only his meals during the period of his labor, but if he helped with harvest he was invariably given a share of the crop. Since the same spot was used for threshing year after year, the threshing floor was repaired before cutting the crop. For such a floor, a low dike was thrown around an area about thirty-five feet in

5: Castetter & Bell N-5 (1938-1940 1942
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Pi Pa 243 diameter which did not flood in time of heavy rain and where the soil would cake. All weeds were removed and the ground flooded, or at least moistened, and allowed to dry out until hard enough to support the weight of a man without making depressions in the soil. It was then tamped by foot, or, in later days, with poles four feet high and about four inches thick at the base, or blocks of wood each bearing a handle. A stout pole ten to fifteen feet tall was erected in the Pa center of the prepared area. Among the Papago the threshing [423] floor belonged to the patriarchal family in common.

When wheat was first grown, in early Spanish days, the plants were pulled out by the roots in harvesting; later they were cut off just above the ground with a knife made of ironwood, or with a sickle. This was ordinarily done by both men and women.

Formerly wheat was not sowed as thickly as at present. While this held for the days when it was planted in hills and later in rows, it also applied to broadcast sowing, hence the crop was not as large per given area as at present. There was no selection of seed wheat. Grain to be planted was simply taken out of the general supply used for food.

Threshing

Regardless of how wheat was harvested, it was placed in small piles to be gathered up, usually by women, and carried Pi Pa [422] —formerly in burden baskets, later in a cotton cloth or on their heads—to the threshing floor. At present these piles are gathered and hauled by wagon. Formerly there was no central pole and the wheat was placed on the floor in small piles, allowed to dry several days; then women trampled the grain by foot or threshed it with ocotillo poles, about five feet long and one and one-half inches thick, first beating each pile, then removing the coarser straw, and flailing again. More recently, the wheat has been piled on the threshing floor and leveled. Then three or four horses were tied abreast, with the inside animal tied to the pole by a long rope. A

5: Castetter & Bell N-5 (1938-1940) 1942
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person mounted on another horse, or at times afoot, drove the animals around and over the wheat continuously for seven or eight hours, thus trampling out the grain. One man kept the wheat raked evenly over the floor. Pc Pa 243

When the task of threshing had been completed, a certain amount of winnowing was done by throwing the straw into the air, formerly by hand, then with improvised forks, and later with steel ones. Women, on their hands and knees, used branches of creosote bush for brushing up, gathering and carrying the coarse straw from the floor. Formerly most of this was burned although a small amount of the straw was saved for making baskets, etc. Small amounts of wheat, too green to be included in the general threshing, were put to one side, allowed to dry further, and flailed later.

Winnowing and Storing

Women then gathered the remaining grain and chaff into shallow winnowing baskets, about three feet across, held them at arm's length in the air and allowed the contents to fall gradually to the ground, the wind meanwhile blowing away the chaff. The grain was then placed in cotton cloths (later in sacks) and carried to the house for further winnowing on some windy day by dropping it from shallow baskets on to sotol mats or cotton cloths. The wheat was finally dried on these mats in the sun for two or three days, remaining bits of straw picked out by hand, then stored in baskets three or four feet high, usually made of grass after the fashion described under the storing of maize. The average Papago family had a crop of about two bushels. Pc Pa 243 251

Utilization of Wheat

When flour was needed the grain was pounded in a wooden mortar with a stone pestle, after being softened with a little water. At present, the grain, before being ground into flour on the metate, is dried thoroughly in the sun, then shaken in a basket until the hulls are blown away. Pc Pa 252

Papago informants said often in earlier days food was

5: Castetter & Bell N-5 (1938-1940 1942.
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Pi Pa 252 scarce when May came around, and it was common to gather matured heads of wheat, beat out the grains and eat them before the general harvesting was begun.

WATERMELONS AND MUSKMELONS

Time and Method of Harvest

Pi Pa 244 [262] The Pimans were very fond of watermelons, moderately so of muskmelons. The Pima usually made two plantings of both, the first ready for harvesting in late June, the second in October, although muskmelons were a little later in maturing than were watermelons. The single Papago planting ripened in October. Watermelons were tested for ripeness by their sound when thumped; also they were considered mature when the tendril on the stem of the melon dried and curled up. However, they often were eaten before completely ripe. Ripening of muskmelons was determined by their odor and resistance to pressure. Pima informants said when the first planting of watermelons had matured the fruit was picked, then the vines irrigated and in about six weeks there was a second, although smaller, crop.

Pi Pa [462] Either men or women picked the melons when harvesting, and put them in a pile. A few melons at a time were placed on a mat or cotton cloth laid on the ground, and carried to the house or storage pit, this usually being done by the men.

Storage

Pi Pa 251 The Pimans stored a goodly supply of watermelons for winter use, but did not bury them in sand as did the lower Colorado River tribes, although informants had heard of the Yuma and Maricopa doing so. Formerly they were stored in the oval pit with gable roof as described under "Storage of Pumpkins," but more recently Pimans have used a cubical underground pit about four feet in each dimension, slanting inward at the bottom on all sides and built on a hill if possible. Poles were placed on the bottom of the pit and covered with cornstalks, on which were placed alternate

5: Castetter & Bell N-5 (1938-1940) 1942
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layers of wheat straw or bean vines, and watermelons. Sides of the pit were not lined. For a roof, poles were laid across the opening and a layer of arrowweed covered with dirt over all. Earth at one end of the pit was dug away to allow a vertical entrance about three feet high, which was covered with a framework of slender poles. Watermelons thus stored kept well for as much as three to four months. Informants said they kept better if a six-inch section of the vine was left attached to the fruit at the time of picking.

Pi Pa 251

Watermelon and muskmelon seed for planting was always selected on the basis of size and quality of fruits, thus from the largest and sweetest specimens.

Pi Pa [242]

Utilization

Fruits when ripe, particularly watermelons, were commonly eaten fresh in great quantities, although at times preserves were made from the rind by cooking without sweetening. Watermelons were never dried. Muskmelons did not store well so had to be eaten relatively soon after maturity, or dried for future use.

Pi Pa [252]

The method for drying muskmelons was similar to that described for pumpkins, except that the melon was peeled and cut lengthwise, the soft pulp and seeds scraped away. Only thoroughly ripened fruits were used in this manner. The short straight strips were then dried on top of the house or *ramada* for several days, or until they could be worked well. A number of strips were placed side by side and tied into bundles, dried further on a shed, twisted into hanks and stored in baskets, or in ollas with a cloth over the contents, covered with a piece of broken olla, then sealed with mud. In spring they were eaten dry without boiling or preparation of any kind unless they had become quite hard, in which case they were boiled and eaten with pinole. At times the dried melon was toasted over a fire to soften, then eaten by alternately taking pieces of melon and drinking pinole. This practice is very rare today. Unlike pumpkins, such dried

Pi Pa [264]

Pi Pa 251 melons did not constitute a staple but were considered more of a delicacy, being sweet and very palatable.

CHILI

Pc Pa 244 Chili (*Capsicum annuum*) is an introduced crop among the Pimans and is recognized by them as such, but its cultivation was not taken over nearly as extensively as among the Pueblo Indians, for example; only a few of the Pimas grew it and even at present it is not cultivated to any extent, for most of them purchase their supply. The chief variety grown today is Anaheim. Chili is grown by the Papago only in very favorable places, since it requires a more reliable source of water than is ordinarily found in Papago territory. These people continue to depend upon the wild *chiltepiquin* (see Chapter IV).

Pi 244 Pima made a single planting of chili, and this when mesquite began to leaf out in late March or early April. It was sowed in small vegetable gardens and harvested in early November. The ripe pods were pulled off by hand and the green ones allowed to remain if weather conditions indicated they might still ripen. However, if frost were indicated, the plants were cut off at the base and piled in the field, and many of the green pods would ripen there. Green fruits were often roasted, then peeled and eaten. At times these dried roasted fruits were stored in sealed ollas and when utilized were steeped in hot water to soften. Those that had not dried readily were tied into strings and hung outdoors, then stored in ollas when dry. Another way of preparing the unripe fruits was to roast and peel them, then pound in a mortar and shape into a large cake, which was dried for future use. When needed, a piece of the mass was broken off and utilized as seasoning.

Pi 244 251 Ripe fruits were spread on a cotton cloth on the ground or on a layer of sticks and allowed to dry for four or five days, being stirred occasionally to facilitate the process. When fully

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dry they were placed in a basket or olla, a cloth placed over [251] 244
them, and the lid of the container sealed with mud.

Men looked after the growing of chili, but it was women's [442] task to harvest, dry and store it.

There was practically no seed selection for chili—it was simply removed from ripe pods and stored. Seed for planting [242] was never taken from the unripe pods.

5: Castetter & Bell N-5 (1938-1940 1942
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CHAPTER IX

CULTIVATION AND UTILIZATION OF TOBACCO —A CEREMONIAL CROP[1]

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The growing of tobacco must be looked upon as ceremonial agriculture, and the smoking of it as an essentially ceremonial practice. It is, therefore, impossible to understand the cultivation of tobacco without taking this ritualistic aspect into consideration, and for this reason it is here considered apart from the growing of other crops.

Among both Papago and Pima, tobacco was regularly grown only by old, rather than young, men although any man had the presumptive right to grow it if he knew its culture and the song. There were two reasons for this limitation to old men—first, a man ordinarily had to be fully grown before he could use tobacco, second, having less to do, the old men had time to grow it.

THE TRADITIONAL ORIGIN OF TOBACCO

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Bernabé López[2] gave the following account of the origin of tobacco:

There was once an old woman who had a grandson and she told him that when she died he should take her out where the ground was soft, fertile, and where the water came down, and bury her, but not to let anyone see where he had buried her. He should then go back to the burial spot at the end of four days and he would see a small plant coming up on her grave. This he did, and again visited the spot at the end of another four days and found the plant had grown to a nice

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[1] For the botanical aspects of Piman tobacco see Chaper IV.

[2] Bernabé Lópes pointed out that his account of the origin, cultivation and smoking of tobacco applied to San Pedro and Coyote Papago villages, and that if we should get accounts from informants at other villages these would be slightly different in certain respects. Informants in general agreed that such inter-village differences existed.

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large one. He broke off one leaf and made a cigarette, which he smoked, and thought his mind was clearer after smoking it. Pi Pa 773

López said tobacco is like a person. After people had used it for a long time, some of them said it was no good, so Tobacco became angry and disappeared, hence people could no longer smoke. She went to the west and the people did not know just where she had gone but they began looking everywhere and finally a man found her. He came back and told the people about it, then went back and tried to persuade her to return. She refused, but did give him one seed pod of tobacco, which he brought back and planted, thus starting it again, and it turned out to be the same kind of tobacco that had originally come up where the old woman was buried, namely "under-the-creosote-bush tobacco" *(N. Tabacum).* (Another informant said tobacco was not a woman but a man.)

This account of the origin of tobacco is essentially the same as that given by other Papago and Pima informants. Russell's brief account of the myth, as well as that of Densmore,[8] is similar in essence.

PRACTICAL ASPECTS OF TOBACCO CULTIVATION

The Papago always planted their tobacco in a desert wash Pa 249 where the soil was silty, never among other crops in their fields, and took very good care of it. The patch might vary in size from eight feet to eight yards square, and this held true for the Pima as well. The Papago method in some villages was to dig ten to twelve holes, each about eighteen inches in diameter and eight inches deep, place seed in the holes and cover with about one-half inch of soil, leaving a depression. (In one village it was customary to fill the holes with fine silt sifted through the hands.) Only two seeds (one informant said four) were placed in each hole, as otherwise the plants became too crowded and produced small leaves. In the village of one informant it was customary to loosen

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[8] Russell, *Pima*, pp. 224, 248; Densmore, *Papago Music*, pp. 29-30.

5: Castetter & Bell N-5 (1938-1940 1942
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249 the soil of the entire plot with a planting stick, after which the tobacco seed was placed on the palm of the hand and blown over the plot, and the seed then covered by brushing the ground with a branch of creosote bush.

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249 Among the Pima, tobacco was always grown on irrigated land just like any other crop, preferably in sandy loam, never in saline soil as it would not do well. The ground was first loosened with the digging stick, then leveled. Tobacco seed was planted by an old Pima man holding it in the palm of his hand, placing the tongue in contact with a portion and more or less spitting or blowing it over the soil. Another man followed and covered the seed by brushing the soil with a branch of saltbush *(Atriplex)*.

The Papago said that, unlike other crops, tobacco was planted "in the month when the weather begins to warm up," or late March to early April in our calendar; the Pima planted it when the mesquite trees began to leaf, which corresponded with late March to late April. Both tribes made but one planting. Germination was said to require four days (undoubtedly a reflection of their ritual number of four).

Pima tobacco was irrigated from a ditch like other crops; holes at each corner of the field, and a brush barrier at the point where the ditch entered the field, trapped any debris brought in by the water. Papago plants, however, were never artificially watered, dependence being entirely on rainfall and resulting flood water.

Pima and Papago plants were not thinned out as they were too precious for this; nor were they ever transplanted. Pima tobacco was hoed, but not cultivated as much as other crops, and then only shallowly, since it had not been planted deeply. Weeds were either pulled out or cut off at the level of the ground with a knife about eight inches long, made of mesquite or ironwood, charred somewhat in a fire and sharpened on both edges with a stone. (It must here be remembered that the growing of tobacco was not aboriginal.) Weeding was done once or twice during the growing season. The

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Papago did not hoe their tobacco, although in one village it was said to be a customary procedure. However, each time the grower visited his patch, he removed the protecting branches, loosened the dirt and hilled it around the plants by hand before replacing the branches. Pi Pa 249

It was the common Papago practice to keep animals out by building a fence around the patch, usually of creosote bush or mesquite posts, with thorny cholla cactus between, although in one village we visited the spot was not enclosed. The Pima never specifically fenced their tobacco, but if the plot were in the corner of a field planted to another crop, the entire field might be fenced. When Papago plants had come up, creosote bush branches were stuck in the ground around them for protection and shading, but when the young plants were partly grown the branches were removed. As nearly as could be determined this tobacco was called "under-the-creosote-bush tobacco" because it was always grown in a place where creosote bush was abundant; it was not planted in ashes by either Papago or Pima, as was done by some tribes. The same plot was used by the Papago for growing tobacco year after year, as long as it did well there. When it ceased to do so a new plot was selected. Pima practice was the reverse, for tobacco was rotated. Manuel Lowe said no volunteer plants came up, but this would be unusual if *N. rustica* were always the species grown. The soil was never fertilized by either people. Pi Pa 249 417

Both Papago and Pima knew that leaves on the plant were mature when they began to turn yellow or brown, and picked them progressively as they ripened. Among the Papago, the first leaves ripened and were gathered before sahuaro harvest, and the rest would be left until after the sahuaro season. Pima tobacco required about ten weeks to produce the first mature leaves, and the patch as a whole was not harvested until after the sahuaro fruit was gathered. Leaves of the first picking were larger, but not of better quality, than those of later ones. The mature leaves were Pi Pa 249

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5: Castetter & Bell N-5 (1938-1940 1942

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Pi Pa 276 The mature leaves were dried by the Papago in the sun on a sotol mat outside the house, or on a piece of ground swept clean for the purpose, and were regarded as ready for smoking when about half dried and very bitter. Leaves were usually dried by the Pima on a cotton blanket, either in the sun or the house, and stirred occasionally with a stick to facilitate this process. If a Papago wanted to use the tobacco before it was fully dried, some leaves would be toasted on a piece of olla over hot coals. However, customarily the leaves were fully dried in the sun and stored without breaking, or first rolled into balls before they were fully dried. They were then placed in an Pa olla or gourd, covered with a piece of broken olla, and sealed [415] with mud mixed with "sticky grass." This dried tobacco [825] might be stored in real bird nests kept in the house, but often in a cavity made by the red-shafted flicker *(Colaptes cafer collaris)* in a sahuaro tree. The Pima knew that leaves dried more rapidly in the sun, but those dried indoors were stronger and made better smoking, as the leaves curled somewhat and seemed thicker than the sun-dried ones; they were rolled and pressed into an olla and a cotton cloth tied over the top, or sealed by placing a shaped piece of broken olla over the opening and securing it with mud. This was for the purpose of keeping out moisture and insects. Neither in drying the leaves nor in putting them into the olla was any particular care taken to keep the leaves unbroken. The olla was stored in the brush house. When a quantity was wanted for smoking, the olla cover was removed, a few handfuls placed in a buckskin (or in later times canvas) pouch, then the olla resealed. This tobacco was very strong.

Among both Papago and Pima, the seeds, pods and flowers were not smoked, but occasionally if a man's supply were low he might crush and mix pieces of small stems with the leaves.

The Pima, after harvesting the ripe leaves, pulled up the plants at the end of the season, and tied them in bundles for storage. Leaves left on these plants matured more or less, were called "third tobacco," and were also smoked. The

5: Castetter & Bell N-5 (1938-1940) 1942
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naked plants were placed on top of the house, never thrown Pi
away or burned, for tobacco was regarded as a man. When Pa
time came for making "wine" from sahuaro fruit, these stems 276
were placed on top of dead ashes on the ground and the wine pots set upon them. Finally the stems were disposed of by burying in a pile of ashes.

After the Papago had gathered all leaves from the plants, a number of pods were gathered for seed, leaving the stalks standing. Pods were dried in an olla and stored in a gourd, sealed with mud mixed with "sticky grass," and kept in the house; or the seed might be stored in a hole in a giant cactus made by the red-shafted flicker. The Papago did not select their tobacco seed, because they usually needed to gather all available. But among the Pima, seed was selected from those plants which were tallest and had the largest pods. Late seed might also be gathered, but if so it was planted by itself because it did not do as well. The seed was cleaned and placed in a gourd, which was sealed with the gummy secretion from the creosote bush, then stored in the ground. Occasionally, however, among these Pima whole plants bearing seed pods were pulled up, dried and hung up indoors, this constituting the seed supply. Tobacco seed was considered by both tribes as very valuable and sometimes given as gifts.

RITUALISTIC ASPECTS OF TOBACCO CULTIVATION

Unlike some tribes, neither Papago nor Pima considered Pi
that other crops grown with tobacco would be injured. How- Pa
ever, the Papago never grew tobacco in their fields, for it 249
must be grown in secret and a man must be in the right spirit when planting. One who planted it must not let anyone see him do so, and, when visiting his tobacco patch which was out of sight of all the other fields, took a circuitous route so that no one would suspect or learn where he was going. If someone discovered the patch and saw the young plants, they would dry up. After plants were grown there was no objection to others seeing them, as no damage could result.

5: Castetter & Bell N-5 (1938-1940 1942
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Pi Pa 249 Also, if one should see a person planting, and knew he was planting tobacco seed, it would not come up. If a man who had ill thoughts came near the tobacco it might not come up, or if it did would not be any good.

The Pima practice differed somewhat. They, too, grew tobacco in an isolated portion of a field where no one else would see it, and for the same reason, but a man could never do the planting by himself. He must always have one or more old men accompany and help him, or at least watch him plant it. The men who assisted were paid in tobacco which the grower had previously raised. The same man did not plant tobacco every year, since he raised enough in one year for two or more years' supply. Several old men worked together to harvest the crop just as they did in planting it.

Pi Pa 249 824 Papago and Pima tobacco had to be planted by older men who knew how to "talk" to it when planting, since it was regarded as a person, saying about as follows: "Now I place you here; may you come up well, grow strong and ripen so that my friends will come here and use you," or "I am a tobacco man and I plant you." The Papago planter then sang the tobacco planting song four times and finally placed the seed in the ground. Each time he came back to see the plants, at required intervals of four days, he sang the same song to the tobacco four times, believing that this gave it more strength (four is the ritual number among both the Papago and the Pima). After the eighth obligatory visit, he need no longer sing the song unless he wished to do so.

Pi Pa [841] 249 Piman women were not allowed to see tobacco growing, and if a menstruating woman were to see the plants they would shrivel up. In planting, tobacco seed must not be called by its real name, else it would not come up, and plants should not be watched too much while growing lest they be dwarfed. All ritualistic aspects of tobacco cultivation were regarded fully as necessary as the practical ones in producing a crop.

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SMOKING

Pima usually carried tobacco in a special buckskin or Pi
foxskin pouch, decorated with sun symbols in bright colors Pa 276
and rattles, sometimes fringed, and closed with a flap folding 415
over the top or occasionally with a drawstring. The simplest 531 281
Papago pouches were a circular piece of dressed buckskin
with a fringe around the entire edge, and tied up with a
thong. Others were made of rabbit, or sometimes fox, skin
with the fur left on. All present-day Papago pouches are of Pi Pa
buckskin, dyed red with the root of *Krameria glandulosa*. [326]
They are made of two semi-circular pieces sewed together [824]
with fringe around the seam and a flap fastened by a knot or
thong serving as a button.[4]

Papago and Pima had no true pipes, a fact mentioned by Pi Pa
Lloyd[5] in 1911. Cigarettes for smoking tobacco were made 276
usually from tubular stem sections of pigweed, or *bledo* Pi Pa
(Amaranthus Palmeri). These were from one-fourth to nearly [824]
an inch across, and six to eight inches long, cut when the
plants were mature, dried and the pith bored out. After
coating with a layer of gummy secretion from the mesquite
tree, they were ready for use. A Papago informant said the
Amaranthus stems were being used for smoking when he was Pa
a boy, but that reed grass *(Phragmites communis)* stems had [824]
been utilized at an earlier time and had fallen into disuse due to scarcity and consequent difficulty in finding them. This reed grass does not occur in southern Arizona (except along the Colorado), but is found along streams in Apache, Navaho and Coconino counties.[6] Russell[7] states that it was formerly common along the Gila. Rolled cigarettes, made by wrapping tobacco in inner corn husks, seem to have been a later development among both peoples. Any special gathering for the good of the tribe or ceremonial occasion demanded

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[4] Castetter and Underhill, *Ethnobiology of the Papago Indians*, p. 50.
[5] Lloyd, *Aw-aw-tam Indian Nights*, p. 89.
[6] J. J. Thornber, Personal correspondence, Feb. 13, 1940.
[7] Russell, *op. cit.*, p. 134.

5: Castetter & Bell N-5 (1938-1940 1942
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Pi Pa 276 that smoking be done only with the reed grass cigarette, never with corn husks. This was true for both Papago and Pima. Lloyd[8] observed that the ceremonial pipes of reed grass had bunches of small bird feathers tied to them. Corn husks to be used for cigarettes were selected when the corn was being shucked, and by each man for himself; only the soft, white inner husks were saved, and these stored in an arrowweed basket. These cigarettes were six to eight inches long and tied at both ends with shreds of corn husk. Often the cigarette was not all smoked at one time, as tobacco was scarce.

Pi Pa 276 227 287 Smoking was practically universal among older Papago and Pima men, but less common among women and practically forbidden for young men. By both tribes it was considered injurious to young men, weakening them, causing a cough, making them lazy and fat, or unable to stand cold and preventing them from being alert. They did not believe it injured old men in any way. A father's usual reply to his son who requested permission to smoke was, "I will let you smoke after you have killed a coyote." In modern times, this restriction as regards smoking by young men largely has broken down, particularly among the Pima.

Tobacco was not chewed nor used as an emetic by either Papago or Pima.

Pi Pa 276 788 To both tribes, smoking was essentially a ceremonial performance, and it had to be tobacco *(Nicotiana)* that was smoked, for it was regarded as having power and no other plant possessed equal efficacy.

Ceremonial smoking in a circuit, using only the reed grass cigarette, was fundamentally similar among Pima and Papago, although differing in detail. It was done only on a few special occasions, such as a party preparing for war, deciding on going on a hunt, having a race with another village, or, in fact, a discussion of any tribal problem, and was regarded as an aid in securing supernatural guidance at

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[8] Lloyd, *loc. cit.*

such times. When either tribe had such council meetings to Pc
settle common problems, the men first talked for a while, Pa 276
then the one in charge of the meeting (usually the chief) 788
took a hollow section of *Amaranthus Palmeri* or *Phragmites communis* stem, filled it with tobacco and lighted it. After taking the ritual number of four puffs he handed it on to the man at his right, always counter-clockwise. In warrior circles, it was moved along near the ground, with the words, "It is traveling low—sneaking like a warrior." Each man took four puffs and similarly passed it to his right, and so on until the cigarette had gone around the entire circle. As each moved the cigarette along to the next, he called him by his kinship term, such as brother, uncle, cousin etc., this conveying the expression of friendly feeling. On its return to the one who lighted it, it was stuck into a small pile of ashes at his side. The men (among both tribes) then discussed the topic of the evening for a time, and when all had agreed on the issue in question, the chief relighted the cigarette and passed it around the circle just as before; or, if the problem were a knotty one requiring lengthy discussion, the cigarette might be relighted and again go the rounds. The main reason for all smoking the same cigarette at the meeting was, in the view of these Indians, to develop a unity of thought, spirit and purpose.

In ceremonies or meetings, each man blew the smoke upward to a Spirit in the heavens, upon whom he was calling for help or guidance in making decisions. Some informants, particularly among the Pima, asserted that the great power called upon was the sun. Smoking, both group and individual, was regarded as a sort of prayer—a medium of communication between the smoker and the Great Spirit, while the smoke itself was a means of gaining an audience, as well as the bearer of messages. Procedures and sequences in this ritual circuit smoking were always in fours, but smoke was not blown in the several directions as was customary among some tribes.

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Pi When smoking individually, a man might do so merely Pa 276 for pleasure or to communicate with the Great Spirit. Thus, 182 while out walking somewhere, he might sit down to smoke and blow the smoke upward as a kind of unexpressed or incipient prayer, meanwhile talking to the tobacco or the smoke. But, in such cases, he must always finish the cigarette; that is, smoke it to a short stub, then roll it into a ball and gently place it on, or stick it into, the ground. A Papago, while smoking, must talk to the smoke which carried his prayer, else it would have no virtue. A man in trouble always smoked, and it was customary to do so before engaging in any endeavor, either personal or collective, for this was looked upon as a great help. It was done either to obtain aid for specific things or for the general welfare, such as planting, seeking rain, securing good crops, curing, health, preparing Pa for warfare, sports etc. In planting or otherwise caring for [241] his crops, a man, while smoking, blew smoke over the field, asking the Great Spirit that his crop grow well, that he have Pa a good crop and that his relatives might benefit thereby. A [526] man planning to run a race against someone from another village might blow smoke toward that village. In this case he would not talk to the Spirit but would say to his opponent, Pa "You are not a great runner, I can beat you." He might also [821] blow smoke toward the Apache when preparing to go to war against them, or toward the Gulf of Mexico when preparing for a salt expedition. One could talk to the Spirit without smoking, but smoking was thought to be an aid.

Pi Pima informants said that to them everything was mys- 782 terious, and for this reason prayed to the darkness. At night a Pima would smoke and blow the smoke on his breast saying, "Kind darkness, give me good rest and good dreams and may nothing harm me." They also had great respect for the sun, well-nigh amounting to worship. In the morning the Pima would blow his smoke toward the sun saying, "Oh kind traveling sun, pity me. Give me the strength that whatever

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work I undertake I may accomplish easily through your Pi 992
power."

Both Papago and Pima regarded tobacco smoke as a puri- Pi
fying agent possessing definite curative properties, and smok- Pa 276
ing was believed to clear one's mind so that he could think 755
better. The shaman, while singing for a patient to ascertain 783
the cause of illness, paused at regular intervals to smoke and puff it over the patient as a means of cleansing or driving out the causative agent, the idea of prayer also being associated with the smoking. The shaman did not grow tobacco for himself; he either hunted wild tobacco or it was given to him, as the Pimans held their shamans in high regard. A Papago man who had come into contact with the supernatural by killing an enemy or an eagle, or by joining the salt pilgrimage, needed to be purified by a period of segregation and fasting. When this period was ended, older men who had gone through the same experience sang a series of ritual songs. Then each separately approached the novice and blew tobacco smoke over him, this portending success for his future.[9]

Smoking was essential while holding the ceremony for Pi
rain, and this was done by shamans, whose special task it was Pa 276
to see that the ceremony was held once a year (see fig. 5). 789
They got together for four days and smoked, and their helpers danced. While smoking, these men searched for rain clouds and called on them to come. It was the office of this class of shamans to make it rain, and rainmaking was not a function of the general population.

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[9] Castetter and Underhill, *op. cit.*, pp. 76-7.

5: Castetter & Bell N-5 (1938-1940 1942
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Pima NU29

CHAPTER X

GENERAL CEREMONIAL ASPECTS OF PIMAN AGRICULTURE

Pi Pa 778 796

Ceremonialism was feebly developed among the Pimans as compared with the Pueblos. Underhill[1] has pointed out that the native line of division among the Papago is along a north and south line, the more advanced groups being to the east, and the more primitive ones to the west. Thus the Archie group retains many of the old ceremonies abandoned elsewhere, such as the important ceremony of the Vikita. Although the Pima formerly had as much or more ritualism than did the Papago, it is much better preserved and more easily and completely obtainable from the Papago.

Pi Pa 241 789

The Piman conception was that ritual was just as important as actual cultivation in producing a crop, and no crop could be expected without it, consequently there existed a variety of individual and collective magical practices associated with the various stages of cultivation.

There was no formal group planting ceremony, the planting ritual consisting largely of singing individual songs of invocation and praise, maize, teparies, pumpkins and tobacco being planted with an individual invocation, which centered around maize as the principal crop. Also, with the Papago, the chief in each village got the people together just before planting time and exhorted them, saying it was now about time to plant crops, and that they should plant and industriously care for them. The day before planting started people began singing planting songs and continued until their repertoire was exhausted. During the summer, various nights of group singing were held to encourage the growth of crops. The most common of the various magical

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[1] Underhill, *Papago*, pp. 60, 234-35.

practices in parts of the Papago territory, to insure a good Pi
yield of both wild and cultivated crops, was to make effigies Pa 241
of the desired fruits and plant them in the gathering grounds 789
after a night of ritual singing; or merely an ironwood stake would be planted instead of an effigy. In general the Papago did not ask for things directly, but in their rituals made statements to the Great Spirit and assumed their needs would be taken care of.

In addition to individual or personal ritualism, the Pimans had certain group ceremonies. After the crops had been put away, inter-village rejoicing often took place, at which games and races were held; this was occasion for jollification, as food was plentiful. People from other villages who helped in the observance were given meals and, at times, such products as corn to take home as a reward for their services. This celebration was held reciprocally from year to year, but always at a village which had harvested a good crop.

A characteristic and important Papago ritual was the green corn ceremony, held when the plants were about three feet high and just before the grain began to set, usually in September. Men gathered ocotillo poles and sang songs over them, then went to the fields and stuck an ocotillo rod at the base of certain corn plants, as well as representatives of each of the several kinds of crops. The object was to invoke the plant to grow strong like ocotillo and bear fruit. This ceremony was a combination of solicitation for a good crop and thanksgiving for those already received.

A regular ritual, practiced by both Papago and Pima, was Pi
the rain ceremony held at the time of giant cactus harvest Pa 241
(see fig. 5). This celebrated the beginning of the Piman 789
New Year, and was the occasion when the fruit of sahuaro 535
was fermented to yield an alcoholic beverage, which was drunk in quantity. This was performed specifically to bring rain, and, formerly, planting was never begun until after the first rain ceremony had been held. This was not because it

5: Castetter & Bell N-5 (1938-1940 1942
NU28 Papago NU28
Pima NU29

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Pa was taboo, but due to dryness of the soil. Any village which
241 found it convenient held the first ceremony and "caused the
729 rain," then other villages in succession held celebrations dur-
635 ing the summer to insure the continuation of rains. One custom was to erect two poles outdoors, about fifteen feet apart, and stretch a rope between them; on this shamans tied eagle feathers, symbolical of clouds, and all danced around these ceremonial objects.

Pi Pima informants spoke of a "rain calling" ceremony in
Pa which certain groups of people got together in the council
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729 house for the purpose of bringing rain. Runners were sent
727 out into every part of the village to secure all available sotol mats, then four posts were erected in a square and the mats arranged around these to form an enclosure, leaving an entrance at the east. Large baskets were placed upside down around the wall, inside the enclosure. Three shamans sat near the west wall, facing the east, with singers behind the baskets. Before each shaman was placed a large bowl containing eagle down, symbolic of clouds, and laid beside the bowls were tail feathers of an eagle. Using notched wooden rasping sticks, the musicians made a peculiar noise by drawing these over the baskets, and all joined in the singing. This was done four times. At certain stages each shaman took all the eagle down from the bowl in front of him, grasped it tightly in his left hand, rubbed it with his right hand and held it to the west, rubbed it again and held it toward the east, and so on in all directions. Then, changing the feathers to his right hand, he moved around in front of the baskets shaking the feathers toward the singers.

This ceremony was carried on during the entire night, and, at its close, the shamans revealed what they had "seen" during the night and prophesied how many days would elapse before it rained.

This is doubtless the "rain-calling" ceremony referred to

5: Castetter & Bell N-5 (1938-1940) 1942
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[p.225]

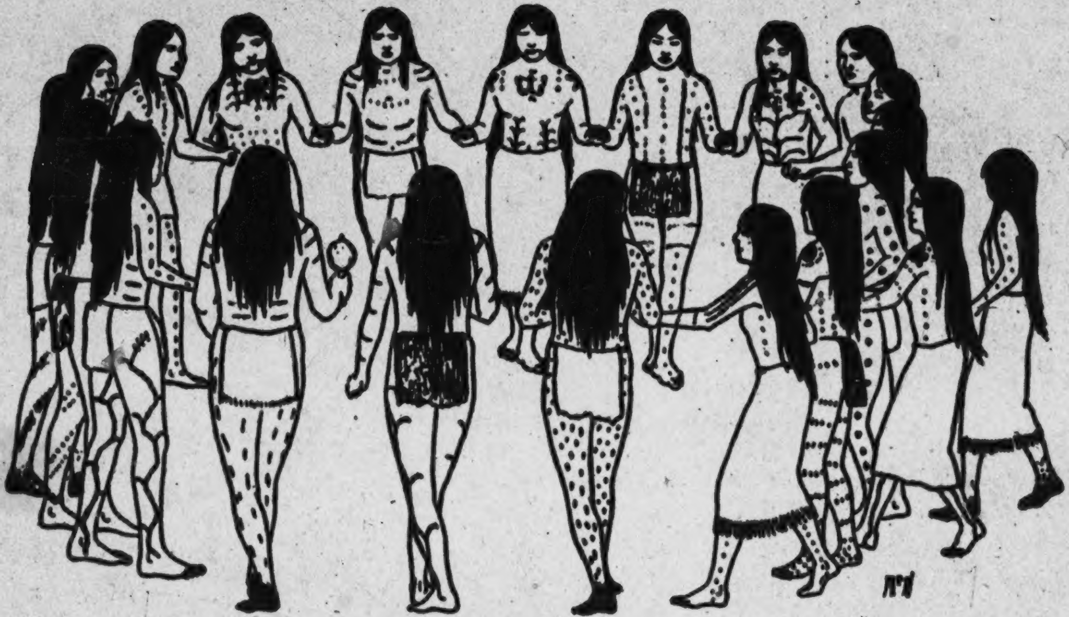

Fig. 5. Papago Rain Dance. (Reproduced from Underhill, *The Papago Indians of Arizona and their Relatives the Pima,* through the permission and courtesy of Dr. Willard W. Beatty, Director of Education, U. S. Office of Indian Affairs.)

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5: Castetter & Bell N-5 (1938-1940 1942

NU28 Papago NU28

Pima NU29

Pi Pa 241 789 787 Pi [724]

by Hrdlicka,[2] held by the Pima during the long dry spell ending in the spring of 1905, in which notched sticks of greasewood (*Sarcobatus vermiculatus*) were rubbed along smaller plain sticks.

Pi Pa 241 789

A modification of the above was the performance of a growing season ritual, held just before crop plants began to set fruit. Singers lined up along the edges of a field, each equipped with a notched rasping stick of creosote which he drew over a plain, slender creosote stick. Starting at the western end of the field, the singers, led by a shaman, moved around its edge until they arrived at the eastern end, meanwhile accompanying noise of the rasps with singing. They used no other ceremonial equipment, and the purpose of the performance was to call upon higher powers to give the people a good crop of well-developed fruits.

Informants said that formerly there was more rain in the Papago and Pima country; the reason for this was that the world was then newer and had greater power, also that more rigid observance of the ceremonies increased the rain.

One of the important Papago group ceremonies was the harvest festival. The Papago villages in the Santa Rosa Valley held this ceremony of Vikita jointly at the end of November or in early December, presumably every fourth year (in the southern part of Papaguería every year). However, its actual occurrence at Santa Rosa depended largely upon a successful harvest rather than the passing of any stated interval. This festival has been described in some detail by Lumholtz, Mason and Davis,[3] although the ceremony discussed by Davis, held in August at Quitobaquito, in Sonora, was accompanied by the drinking of much sahuaro wine, a feature obviously missing in early winter at Santa Rosa. The purpose of this ceremony was to invoke the higher power to give the people a good crop, to bring rain, free

[2] Hrdlicka, *Notes on the Pima of Arizona*, p. 41.

[3] Lumholtz, *New Trails*, pp. 92-8; Mason, *The Papago Harvest Festival*; Davis, *The Papago Ceremony of Vikita*.

5: Castetter & Bell N-5 (1938-1940) 1942
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crops from disease and to insure good health and long life. Pi Pa
The paraphernalia used con[illegible]d of effigies representing 241 789
clouds, corn, sahuaros, chollas, mesquite beans, deer etc.,
and were carried in a procession by masked singers. Every Pi
man in each village made some such effigy out of twigs and Pa 241
colored cotton, and this he carried to the scene of activity. 789
Painted prayer sticks, adorned with fine turkey or eagle 293
feathers, and the bull-roarer symbolized growing corn, lightning, thunder, clouds and the sound of rain. A group of
clowns performed a variety of activities, such as carrying long
poles to represent those with which sahuaro fruit is gathered,
gourd rattles, portraying giant cactus trees, and wearing
turkey feathers on their heads to symbolize the fruit. There
were also representations of the sun and moon. They went
through the motions of shooting at men disguised as deer,
or at imaginary jackrabbits, antelope and other game. A Pi
replica of a field was made by each village, and sand brought Pa
from the arroyo was placed nearby to portray the mouth of 241 789
the arroyo close to the field. Clowns in proper costume investigated to see if these "fields" were in proper condition, and
imitated people working in fields by cleaning the "ditches"
and burning "weeds." Shamans sprinkled cornmeal on the
breasts of everyone, thus preventing sickness and bringing
them long life, and, according to Davis,[4] such meal was made
only from branched or twin ears of corn. Representatives
from each village sang their cycle of eight songs, repeating Pi
as often as necessary, for singing continued all night. Just Pa
before dawn, the singers disrobed and painted themselves [301]
in a spotted fashion to depict multicolored ears of corn,
principally blue, red and white. Girls carried ears of blue
and white corn, and in each village group there were two
men who represented yellow corn. Invariably the best specimens of corn, pumpkins and teparies were used in this
ceremony. Content of the songs represented a description of
the appearance of clouds, the occurrence of thunder, light-

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[4] *Ibid.*

5: Castetter & Bell N-5 (1938-1940 1942
NU28 Papago NU28
Pima NU29

P' Pa 241 789

ning, of rain and water running in the arroyos, of corn growing and fruiting. The purpose was to assist in producing a plentiful harvest and to give thanks for favors already bestowed.

Pima informants said that in earlier years their people had taken over from the Papago, in a half-hearted way, the ceremony of Vikita, but that it soon died out. However, in 1906, Brown[5] described a Pima-Maricopa harvest festival formerly held south of the village of Blackwater on the Gila, and, though known as a harvest festival, it might be performed on one or more important occasions each year. Here a group of musicians beat drums of carefully burned out cottonwood logs, a piece of half-tanned deerskin stretched P' [534] across each end. Others drew bone rasps over the bottoms of upturned baskets, which had been spread with a layer of the gummy secretion of the mesquite tree. An unusual feature of this celebration was that the performers carried wooden and stone phalli, which were doubtless symbolic of fertility. Also, they carried long wands, evidently prayer sticks, tipped with feathers of wild turkey.

P' Pa [801] 821 822 191

Some ceremonial practices and beliefs similar to those found among the Pueblos were also to be observed among the Pimans. One of these was color-direction association. The Piman ceremonial number is four, and four directions are recognized, associated with ceremonial colors. As applied to maize, one Pima informant at Sweetwater volunteered the information that white corn is east; red corn, west; blue corn is north; yellow corn, south. In addition, variegated corn was said to represent "up," while "down" corn was nearly black. This informant was asked on a number of different occasions to repeat the relation between directions and colors of corn and the results were invariably the same; we found it impossible to confuse him. Although this color direction does not check exactly with that given by Parsons,[6] who has listed a

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[5] Brown, *A Pima-Maricopa Ceremony*.

[6] Parsons, *Notes on the Pima*, p. 459.

5: Castetter & Bell N-5 (1938-1940) 1942
NU28 Papago NU2?
Pima NU29

number of comparisons between the Pima and the Pueblos, or by Underhill or Whiting,[7] the general situation has its counterpart among the Pueblo Indians. Pi Pa 221 222 171

Another Pueblo resemblance is seen in the assertion of some Pima informants that, if a man accidentally cut off a stalk of corn while hoeing, it was buried in the field, or tucked under his belt and carried home at night. He felt very badly about the experience for corn was his very life. It was just like "killing his own life," or injuring a friend. Papago had no such outlook. When a Papago cut off a stalk of corn he too felt badly, but this was due purely to economic considerations. However, one informant said that, if the hoes of two persons struck together while hoeing, it was an omen that enemies were coming, so the workers quit and prepared for them. This, too, has its Pueblo counterpart. Still another Pueblo resemblance is seen in the statement of one Pima informant that planting was always started in the east of the field and proceeded toward the west. Pi Pa 171 241

It is customary among the Pueblos for the people of a village to prepare, plant, hoe, irrigate and harvest the cacique's field, which in reality is a community field. Among the Pimans, it was not uncommon for the people in a village to take care of the chief's or headman's field, although this was never out of ritualistic considerations as among the Pueblos, but for purely practical reasons. Their view was that if the chief were too busily engaged with tribal matters to look after his farming it was only fair for his people to assist. It was in no sense compulsory.

Pimans, particularly younger women, carefully avoided branched or twin ears of corn, but these were commonly used to provide cornmeal for ceremonies. Informants said that women refrained from eating such ears because they feared having twins, which were regarded as an ill omen. Pi Pa 784 787 845

There was no ceremonial sexual restriction at harvest or

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[7] Underhill, *op. cit.*, p. 124; Whiting, *Ethnobotany of the Hopi*, p. 45.

5: Castetter & Bell N-5 (1938-1940 1942
NU28 Papago NU28
Pima NU29

Pi Pa 191 241

any other period in the cultivation of crops, nor was there ceremonial copulation in the fields to increase fertility.

A magical practice common to Pima and Papago was performed for the purpose of increasing the productivity of crops, particularly pumpkins, watermelons and muskmelons. When these plants began to flower their owner sought a set of female twins whom he took into the fields. Each twin gathered tips of four pumpkins or melon vines, and walked through the patch chewing them and blowing her breath over the plants. The twins advised the owner to stay out of the field four or five days, then come back and he would see that numerous pumpkins and melons had set.

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